

State of California
The Resources Agency

DEPARTMENT OF WATER RESOURCES
Division of Operations and Maintenance

STATE WATER PROJECT OPERATIONS DATA

For the month of:
August 1999

Gray Davis
Governor
State of California

Mary D. Nichols
Secretary for Resources
The Resources Agency

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**Department of Water Resources
Division of Operations and Maintenance**

**State Water Project
Operations Data**
for the Month of August

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MONTHLY HIGHLIGHTS

The following highlights are activities or actions that impacted State Water Project operations during the month of August 1999.

The first half of August was cool, but the last 10 days of the month saw a number of 100-degree Fahrenheit afternoons in the Central Valley. A few showers brought generally small amounts of rain at scattered locations, mostly in the mountains. Heavy thunderstorm and lightning activity in northern California on August 22 and 23 started over 200 wildfires. This kind of scattered shower activity is common for August, although the intensity of lightning strikes was unusual.

Stream runoff statewide was near average for the month, leaving the seasonal total since October 1 unchanged between 110 and 115 percent of average. Southern Sierra runoff was below normal, as had been the pattern this year. Last year seasonal runoff was 175 percent with the higher percentages in the south.

Reservoir storage decreased at a normal pace. The 155 major in-state reservoirs held nearly 27 MAF, about 115 percent of average, on September 1. Last year storage at this time was a high 135 percent of average, due to a large late snowmelt season.

Colorado River interstate storage was about 1MAF less than last year but still around 92 percent of capacity

In August it appeared that La Nina, the cooler eastern tropical Pacific sea surface condition, would continue into the next winter. The National Weather Service long range forecasts were similar to those of a year ago in predicting above normal precipitation in the northern third of California and in the Pacific Northwest and drier than average conditions in the southern end of California as well as in Arizona and New Mexico

On August 31, total storage in major SWP reservoirs was about 3.7 MAF, compared with 4.59 MAF at the same time in 1998. Average storage in the major SWP reservoirs on August 31 is about 3.49 MAF. Storage in Lake Oroville was about 2.6 MAF, compared to 3.06 MAF at this time last year. The State's share of San Luis Reservoir storage was about 451 TAF, as compared with 874 TAF at this time last year. On August 31, the combined storage in our southern reservoirs was about 642 TAF, compared with 661 TAF at this time last year. Through August, SWP water deliveries for 1999 were 1.934 MAF, representing a combination of annual entitlement, exchange, recreation, wheeling, unscheduled, purchase pool, interruptible, transfer, and local supply. This was 655 TAF more than delivered during the same period in 1998.

The U. S. Army Corps of Engineers authorized SWP to temporarily increase the diversion at Clifton Court Forebay by 500 cfs. This temporary increase was approved through September 30, 1999 and was used to make up pumping curtailments earlier in the year.

Work on the San Joaquin River riprap project (Sherman Island) was underway after being on hold since last fall. Large riprap used for emergency repairs in winter 1998 was to be removed from the levee, crushed to the proper gradation, and replaced on the levee. The land side work was completed during the summer.

On August 6, the SWP increased inflow to Clifton Court Forebay above the nominal rate of 6,680 cfs. This increase, approved by the U.S. Army Corps of Engineers, was initiated to begin recovery of the State's share of San Luis Reservoir. From mid-April to the first part of July, the SWP reduced exports by about 324 TAF to protect delta smelt residing in the South Delta. About 112 TAF of that quantity was left upstream in Oroville and will be moved into San Luis Reservoir later in the year. Increasing the diversion rate into Clifton Court Forebay would allow the SWP to place up to 60 TAF of additional project water into San Luis Reservoir. While we expect to fill the State share of San Luis Reservoir, there is a significant probability that delivery of Interruptible Water could be impacted.

Table 1. Antelope Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 22,566 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/	
				Stream-flow Maint.	Water Supply Contract	Water Right				
Jul 31	5000.81	21,476								
1	5000.67	21,350	-126	20	0	0	0			
2	5000.62	21,305	-45	20	0	0	0			
3	5000.57	21,260	-45	20	0	0	0			
4	5000.51	21,206	-54	20	0	0	0			
5	5000.45	21,152	-54	20	0	0	0			
6	5000.39	21,099	-53	20	0	0	0			
7	5000.34	21,054	-45	20	0	0	0			
8	5000.29	21,010	-44	20	0	0	0			
9	5000.24	20,965	-45	20	0	0	0			
10	5000.21	20,939	-26	20	0	0	0			
11	5000.17	20,903	-36	20	0	0	0			
12	5000.13	20,868	-35	20	0	0	0			
13	5000.09	20,832	-36	20	0	0	0			
14	5000.01	20,762	-70	20	0	0	0			
15	4999.95	20,700	-62	20	0	0	0			
16	4999.89	20,647	-53	20	0	0	0			
17	4999.85	20,612	-35	20	0	0	0			
18	4999.79	20,559	-53	20	0	0	0			
19	4999.73	20,506	-53	20	0	0	0			
20	4999.68	20,462	-44	20	0	0	0			
21	4999.66	20,444	-18	20	0	0	0			
22	4999.63	20,418	-26	20	0	0	0			
23	4999.63	20,418	0	20	0	0	0			
24	4999.45	20,260	-158	20	0	0	0			
25	4999.37	20,190	-70	20	0	0	0			
26	4999.31	20,138	-52	20	0	0	0			
27	4999.29	20,120	-18	20	0	0	0			
28	4999.23	20,068	-52	20	0	0	0			
29	4999.19	20,033	-35	20	0	0	0			
30	4999.09	19,903	-130	20	0	0	0			
31	4999.04	19,903	0	20	0	0	0			
Total cfs-days			---	620	0	0	0	289	909	116
Total ac-ft			-1,573	1,230	0	0	0	574	1,804	231

1/ Values not available on a daily basis.

Table 2. Frenchman Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 55,477 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow
				Regulated Release			Spill	Estimated Evaporation And Seepage	Total Outflow	
				Stream-flow Maint.	Water Supply Contract	Water Right				
Jul 31	5584.71	50,432								
1	5584.60	50,269	-163	0	64	0	0			
2	5584.49	50,105	-164	0	64	0	0			
3	5584.34	49,884	-221	0	64	0	0			
4	5584.15	49,603	-281	0	73	0	0			
5	5584.02	49,412	-191	0	78	0	0			
6	5583.85	49,163	-249	0	68	0	0			
7	5583.76	49,031	-132	0	63	0	0			
8	5583.67	48,900	-131	0	63	0	0			
9	5583.56	48,739	-161	0	59	0	0			
10	5583.52	48,681	-58	0	62	0	0			
11	5583.43	48,550	-131	0	62	0	0			
12	5583.32	48,390	-160	0	56	0	0			
13	5583.24	48,274	-116	0	45	0	0			
14	5583.20	48,216	-58	0	41	0	0			
15	5583.11	48,086	-130	0	41	0	0			
16	5583.02	47,956	-130	0	41	0	0			
17	5582.94	47,841	-115	0	46	0	0			
18	5582.84	47,697	-144	0	49	0	0			
19	5582.74	47,553	-144	0	49	0	0			
20	5582.67	47,453	-100	0	68	0	0			
21	5582.57	47,309	-144	0	78	0	0			
22	5582.40	47,066	-243	0	78	0	0			
23	5582.32	46,952	-114	0	78	0	0			
24	5582.17	46,739	-213	0	78	0	0			
25	5582.03	46,540	-199	0	78	0	0			
26	5581.91	46,370	-170	0	89	0	0			
27	5581.80	46,215	-155	0	88	0	0			
28	5581.67	46,031	-184	0	84	0	0			
29	5581.53	45,835	-196	0	84	0	0			
30	5581.37	45,610	-225	0	89	0	0			
31	5581.24	45,428	-182	0	91	0	0			
Total cfs-days			- - -	0	2,071	0	0	509	2,580	57
Total ac-ft			-5,004	0	4,108	0	0	1,009	5,117	113

1/ Values not available on a daily basis.

Table 3. Lake Davis

Daily Operation
(in acre-feet except as noted)

Capacity: 84,371 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/	
				Stream-flow Maint.	Water Supply Contract	Water Right				
Jul 31	5772.47	74,518								
1	5772.44	74,405	-113	19	0	3	0			
2	5772.39	74,217	-188	23	0	4	0			
3	5772.35	74,067	-150	24	0	4	0			
4	5772.32	73,954	-113	24	0	4	0			
5	5772.27	73,766	-188	24	0	4	0			
6	5772.22	73,579	-187	24	0	4	0			
7	5772.18	73,430	-149	24	0	3	0			
8	5772.15	73,317	-113	25	0	3	0			
9	5772.17	73,392	75	25	0	3	0			
10	5772.19	73,467	75	24	0	4	0			
11	5772.17	73,392	-75	24	0	4	0			
12	5772.13	73,243	-149	24	0	4	0			
13	5772.09	73,093	-150	24	0	4	0			
14	5772.04	72,907	-186	25	0	3	0			
15	5772.02	72,833	-74	25	0	3	0			
16	5772.01	72,795	-38	24	0	4	0			
17	5771.97	72,647	-148	24	0	4	0			
18	5771.94	72,535	-112	24	0	4	0			
19	5771.89	72,350	-185	24	0	4	0			
20	5771.89	72,350	0	56	0	5	0			
21	5771.89	72,350	0	75	0	5	0			
22	5771.89	72,350	0	75	0	5	0			
23	5771.89	72,350	0	132	0	6	0			
24	5771.89	72,350	0	165	0	6	0			
25	5771.48	70,837	-1,513	165	0	6	0			
26	5771.38	70,471	-366	164	0	6	0			
27	5771.27	70,070	-401	161	0	6	0			
28	5771.16	69,669	-401	133	0	6	0			
29	5771.05	69,270	-399	125	0	5	0			
30	5770.93	68,836	-434	141	0	5	0			
31	5770.81	68,404	-432	164	0	6	0			
Total cfs-days			- - -	2,010	0	137	0	1,206	3,353	271
Total ac-ft			-6,114	3,987	0	272	0	2,392	6,651	537

1/ Values not available on a daily basis.

Table 4. Lake Oroville

Daily Operation

(in acre-feet except as noted)

Capacity: 3,537, 580 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow					Inflow	
				Hyatt Powerplant Generation 1/	Palermo Canal	Evaporation 2/	Spill	Total Outflow	Hyatt Powerplant Pumpback	Computed Inflow 3/
Jul 31	854.21	2,865,217								
1	853.25	2,852,178	-13,039	18,779	37	272	0	19,088	0	6,049
2	852.05	2,835,939	-16,239	22,721	37	304	0	23,062	0	6,823
3	850.75	2,818,420	-17,519	23,220	37	337	0	23,594	0	6,075
4	849.72	2,804,594	-13,826	19,835	37	337	0	20,209	0	6,383
5	848.59	2,789,480	-15,114	20,083	37	275	0	20,395	0	5,281
6	847.54	2,775,487	-13,993	18,579	37	249	0	18,865	0	4,872
7	846.92	2,767,248	-8,239	13,140	37	231	0	13,408	0	5,169
8	846.60	2,763,002	-4,246	10,750	37	247	0	11,034	0	6,788
9	845.74	2,751,614	-11,388	18,101	38	272	0	18,411	0	7,023
10	844.81	2,739,337	-12,277	17,450	38	204	0	17,692	0	5,415
11	844.12	2,730,252	-9,085	14,232	38	110	0	14,380	0	5,295
12	843.44	2,721,320	-8,932	15,248	38	228	0	15,514	0	6,582
13	842.47	2,708,614	-12,706	18,582	38	270	0	18,890	0	6,184
14	842.32	2,706,653	-1,961	7,469	38	302	0	7,809	0	5,848
15	842.30	2,706,392	-261	5,323	38	251	0	5,612	0	5,351
16	841.70	2,698,558	-7,834	12,534	38	335	0	12,907	0	5,073
17	841.20	2,692,041	-6,517	12,162	38	368	0	12,568	0	6,051
18	840.67	2,685,146	-6,895	11,703	38	317	0	12,058	0	5,163
19	840.25	2,679,691	-5,455	11,675	38	267	0	11,980	0	6,525
20	839.60	2,671,258	-8,433	14,920	38	316	0	15,274	0	6,841
21	839.36	2,668,149	-3,109	9,028	38	332	0	9,398	0	6,289
22	838.80	2,660,904	-7,245	12,986	38	332	0	13,356	0	6,111
23	838.00	2,650,578	-10,326	14,282	38	348	0	14,668	0	4,342
24	836.83	2,635,527	-15,051	20,064	38	463	0	20,565	0	5,514
25	835.92	2,623,861	-11,666	19,005	38	453	0	19,496	0	7,830
26	834.97	2,611,722	-12,139	17,792	38	394	0	18,224	0	6,085
27	834.31	2,603,311	-8,411	15,440	38	229	0	15,707	0	7,296
28	834.30	2,603,183	-128	7,068	38	293	0	7,399	0	7,271
29	834.17	2,601,529	-1,654	5,131	38	261	0	5,430	0	3,776
30	833.20	2,589,208	-12,321	14,408	38	302	0	14,748	0	2,427
31	832.30	2,577,812	-11,396	14,627	38	285	0	14,950	0	3,554
Total			-287,405	456,337	1,170	9,184	0	466,691	0	179,286

1/ Includes bypass flows

2/ Evaporation will be zero for days when there is precipitation or heavy overcast.

3/ Does not include pumpback.

**Table 5. Thermalito Forebay
Including Diversion Pool and Power Canal**

Daily Operation

(in acre-feet except as noted)

Capacity: 25,120 ac-ft

August 1999

Date	Storage 1/	Storage Change	Inflow			Outflow					Losses (-) And Gains (+)	
			Lake Oroville Releases 2/	Kelly Ridge Generation	Thermalito Pumping- Generating Plant Pumpback	Thermalito Pumping- Generating Plant Generation 3/	Butte County	Thermalito Irrigation District	Releases To River 4/	Hyatt Powerplant Pumpback		
Jul 31	23,261											
1	23,739	478	18,779	514	0	17,856	0	11	1,239	0	291	
2	23,299	-440	22,721	498	0	22,748	0	11	1,240	0	340	
3	22,839	-460	23,220	474	0	23,087	0	11	1,228	0	172	
4	23,120	281	19,835	432	0	19,096	0	11	1,233	0	354	
5	22,662	-458	20,083	532	0	20,008	0	11	1,238	0	184	
6	23,179	517	18,579	470	0	17,539	0	11	1,248	0	266	
7	23,137	-42	13,140	502	0	12,750	0	11	1,246	0	323	
8	23,657	520	10,750	499	0	9,627	0	11	1,221	0	130	
9	22,633	-1,024	18,101	499	0	18,439	0	11	1,314	0	140	
10	23,164	531	17,450	499	0	16,472	0	11	1,288	0	353	
11	23,332	168	14,232	502	0	13,424	0	11	1,290	0	159	
12	23,087	-245	15,248	500	0	14,689	0	11	1,242	0	-51	
13	22,832	-255	18,582	411	0	18,355	0	11	1,230	0	348	
14	22,711	-121	7,469	504	0	6,908	0	11	1,192	0	17	
15	23,368	657	5,323	502	0	3,922	1	11	1,196	0	-38	
16	23,555	187	12,534	506	0	11,689	1	11	1,205	0	53	
17	23,481	-74	12,162	502	0	11,611	1	11	1,203	0	88	
18	23,390	-91	11,703	480	0	11,132	1	11	1,214	0	84	
19	23,710	320	11,675	470	0	10,672	1	11	1,222	0	81	
20	23,137	-573	14,920	470	0	14,866	1	11	1,237	0	152	
21	23,155	18	9,028	500	0	8,363	1	11	1,188	0	53	
22	23,081	-74	12,986	502	0	12,420	1	11	1,208	0	78	
23	23,044	-37	14,282	500	0	13,730	1	12	1,222	0	146	
24	22,927	-117	20,064	424	0	19,533	1	12	1,223	0	164	
25	22,937	10	19,005	502	0	18,460	1	12	1,233	0	209	
26	23,082	145	17,792	506	0	17,022	1	12	1,227	0	109	
27	23,238	156	15,440	498	0	14,702	1	12	1,204	0	137	
28	23,867	629	7,068	504	0	5,781	1	12	1,178	0	29	
29	23,535	-332	5,131	506	0	4,773	1	12	1,138	0	-45	
30	23,050	-485	14,408	498	0	14,273	1	12	1,198	0	93	
31	23,202	152	14,627	504	0	13,892	1	12	1,231	0	157	
Total		-59	456,337	15,210	0	437,839	17	350	37,976	0	4,576	

1/ Sum of Thermalito Forebay and Diversion Pool.

2/ Sum of releases from Lake Oroville through Hyatt plant, spill, and spillway leakage.

3/ Includes Bypass flows at Thermalito.

4/ The sum of the flows from fish barrier dam and the fish hatchery.

Table 6. Thermalito Afterbay

Daily Operation

(in acre-feet except as noted)

Capacity: 57,040 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow	Outflow						Losses (-) and Gains (+)	Total Releases to River 2/	
				Thermalito Pumping-Generating Plant Generation 1/	Sutter Butte Canal	Western Canal Lateral	Richvale Canal	Western Canal	Afterbay River Outlet	Thermalito Pumping-Generating Plant Pumpback			
Jul 31	129.49	30,478											
1	128.29	26,707	-3,771	17,856	3,015	31	866	1,794	15,729	0	-192	16,968	
2	128.69	27,937	1,230	22,748	2,976	31	866	1,794	15,729	0	-122	16,969	
3	129.46	30,380	2,443	23,087	2,976	31	865	1,794	14,737	0	-241	15,965	
4	129.32	29,929	-451	19,096	2,995	31	867	1,752	13,726	0	-176	14,959	
5	129.79	31,457	1,528	20,008	2,955	31	865	1,726	12,754	0	-149	13,992	
6	129.82	31,556	99	17,539	2,936	31	867	1,726	11,762	0	-118	13,010	
7	128.76	28,155	-3,401	12,750	2,936	31	867	1,702	10,751	0	136	11,997	
8	126.78	22,299	-5,856	9,627	2,955	31	869	1,688	9,739	0	-201	10,960	
9	128.32	26,798	4,499	18,439	2,975	32	863	1,684	8,271	0	-115	9,585	
10	129.62	30,900	4,102	16,472	2,955	32	849	1,674	6,764	0	-96	8,052	
11	129.97	32,052	1,152	13,424	2,936	30	843	1,646	6,744	0	-73	8,034	
12	130.72	34,586	2,534	14,689	2,936	30	845	1,609	6,744	0	9	7,986	
13	132.33	40,331	5,745	18,355	2,896	30	849	1,569	6,744	0	-522	7,974	
14	130.94	35,347	-4,984	6,908	2,896	28	841	1,555	6,724	0	152	7,916	
15	128.48	27,288	-8,059	3,922	2,896	28	811	1,553	6,744	0	51	7,940	
16	128.51	27,380	92	11,689	2,876	30	799	1,553	6,248	0	-91	7,453	
17	128.90	28,594	1,214	11,611	2,836	30	785	1,555	5,236	0	45	6,439	
18	129.25	29,704	1,110	11,132	2,817	30	780	1,531	4,760	0	-104	5,974	
19	129.31	29,897	193	10,672	2,797	30	780	1,486	5,236	0	-150	6,458	
20	130.32	33,223	3,326	14,866	2,777	30	780	1,474	6,228	0	-251	7,465	
21	129.10	29,226	-3,997	8,363	2,817	30	780	1,474	7,240	0	-19	8,428	
22	128.87	28,500	-726	12,420	2,817	30	754	1,474	7,736	0	-335	8,944	
23	129.15	29,385	885	13,730	2,876	30	742	1,426	7,736	0	-35	8,958	
24	131.06	35,765	6,380	19,533	2,797	30	742	1,363	7,736	0	-485	8,959	
25	132.60	41,334	5,569	18,460	2,737	30	742	1,345	7,736	0	-301	8,969	
26	133.65	45,345	4,011	17,022	2,737	30	700	1,321	8,232	0	9	9,459	
27	133.67	45,424	79	14,702	2,658	30	682	1,262	9,699	0	-292	10,903	
28	131.28	36,538	-8,886	5,781	2,618	28	680	1,200	9,739	0	-402	10,917	
29	128.55	27,504	-9,034	4,773	2,638	28	639	1,186	9,719	0	403	10,857	
30	128.51	27,380	-124	14,273	2,598	28	623	1,137	9,243	0	-768	10,441	
31	129.29	29,833	2,453	13,892	2,460	26	589	1,047	7,299	0	-18	8,530	
Total			-645	437,839	88,090	928	24,430	47,100	273,485	0	-4,451	311,461	

1/ Includes Bypass flows at Thermalito.

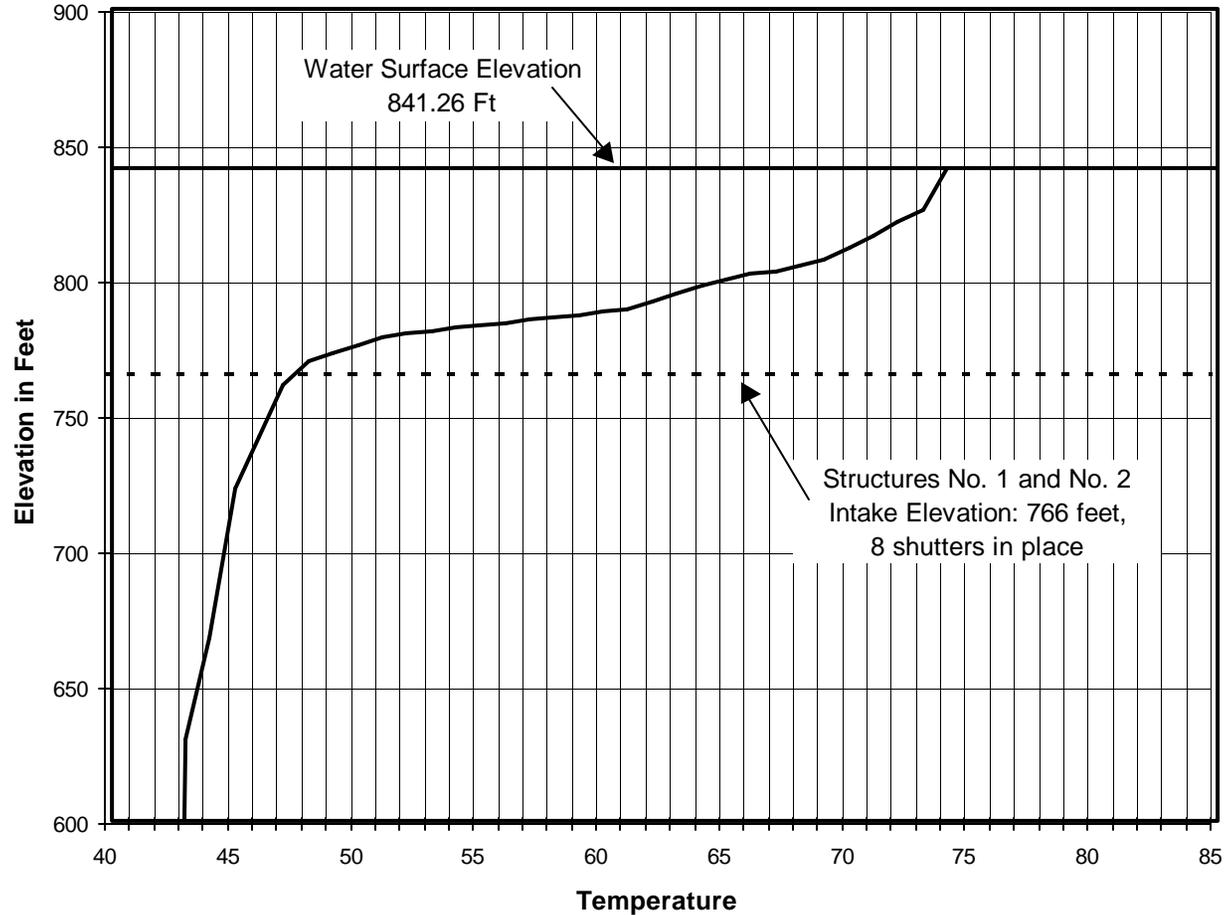
2/ The sum of the flows from the fish barrier dam, fish hatchery, and afterbay river outlet.

Table 7. Oroville-Thermalito Complex

Water Temperature Data
(in degrees Fahrenheit)
August 1999

Date	Mean Daily Temperature	
	Thermalito Afterbay Outlet	Fish Hatchery
1	62	59
2	62	60
3	62	60
4	63	58
5	63	58
6	61	56
7	61	57
8	62	57
9	62	56
10	60	57
11	60	58
12	61	58
13	62	58
14	62	58
15	64	60
16	65	59
17	65	57
18	65	56
19	65	56
20	65	54
21	64	55
22	64	54
23	63	55
24	62	55
25	61	56
26	59	56
27	60	57
28	61	54
29	62	54
30	63	54
31	62	54

Lake Oroville Temperature Profile on August 18, 1999



Note: Water surface elevations on Table 4 are taken at Oroville Dam at midnight and may differ slightly from those shown on this table which are normally taken at mid-day and upstream from Oroville Dam.

Table 9. Delta Field Division Plant Data

(in acre-feet)

August 1999

Date	North Bay Aqueduct		California Aqueduct		South Bay Aqueduct			
	Barker Slough Pumping Plant	Cordelia Pumping Plant	Banks Pumping Plant		South Bay Pumping Plant	Del Valle Pumping Plant		
			Total	SWP		Into Lake	Into Aqueduct	Gravity Flow Through Plant Into Aqueduct
1	191	84	13,023	13,023	532	0	0	0
2	180	72	10,140	10,140	560	0	0	19
3	191	82	10,390	10,390	562	0	0	51
4	176	69	13,031	13,031	541	0	0	67
5	205	89	11,517	11,517	546	0	0	41
6	191	84	13,485	13,485	550	0	0	11
7	184	81	13,753	13,753	554	11	0	0
8	172	74	13,754	13,754	560	22	0	0
9	164	67	13,735	13,735	562	14	0	16
10	170	70	13,598	13,598	545	0	0	16
11	168	65	13,569	13,569	550	0	0	0
12	175	67	13,472	13,472	534	0	0	0
13	172	69	13,502	13,502	532	0	0	0
14	175	72	13,692	13,692	532	0	0	0
15	175	69	12,267	12,267	531	0	0	0
16	175	68	12,830	12,830	544	0	0	0
17	181	74	13,327	13,327	554	0	0	19
18	195	86	13,657	13,657	541	0	0	34
19	200	89	13,802	13,802	532	0	0	33
20	177	76	13,824	13,824	550	0	0	19
21	191	83	13,900	13,900	549	0	0	12
22	200	84	13,916	13,916	544	0	0	14
23	200	86	11,410	11,410	562	0	0	13
24	200	88	12,093	12,093	562	0	0	29
25	215	95	13,579	13,579	551	0	0	44
26	233	99	14,388	14,388	562	0	0	59
27	182	75	14,011	14,011	562	0	0	78
28	200	83	14,024	14,024	526	0	0	79
29	194	86	13,814	13,814	492	0	0	87
30	190	76	13,842	13,842	513	0	0	72
31	200	88	14,009	14,009	529	0	0	39
Total	5,822	2,450	409,354	409,354	16,864	47	0	846

Table 10. Clifton Court Forebay

Daily Operation of Gates

August 1999

Date	Time								Amount of inflow in Acre-Feet
	Opened	Closed	Opened	Closed	Opened	Closed	Opened	Closed	
1	---	13:39	18:53	19:53	22:42	---			11,085
2	---	13:35	19:57	20:35					10,027
3	0:35	14:00	20:24	21:24					10,103
4	0:49	6:35	9:35	17:55					11,016
5	1:38	7:48	10:48	22:00					13,242
6	2:31	8:20	11:20	22:30					14,231
7	0:00	0:30	3:28	9:20	12:20	22:40			14,232
8	0:01	1:35	4:25	10:55	13:55	21:20			14,259
9	0:05	2:37	5:19	11:43	14:43	21:20			14,240
10	0:01	3:32	6:12	12:30	15:30	22:05			14,082
11	0:01	4:27	7:06	13:08	16:15	22:40			14,242
12	0:10	5:16	7:51	14:01	16:20	---			14,241
13	---	6:04	8:38	14:36	17:37	---			13,685
14	---	6:52	9:26	15:18	18:19	---			13,793
15	---	7:42	15:58	18:58	23:16	---			8,484
16	---	15:15	23:54	---					12,166
17	---	5:33	8:33	21:20					14,242
18	0:33	6:39	9:39	20:00					14,242
19	0:41	7:44	10:44	20:15					14,237
20	2:05	8:47	11:47	20:18					14,222
21	0:01	0:28	2:58	9:43	12:43	20:45			14,236
22	0:01	1:30	3:50	10:31	13:31	20:40			14,223
23	0:01	2:20	4:39	8:00	10:02	11:13	14:13	20:15	11,892
24	0:01	3:05	5:24	11:50	14:50	21:25			12,477
25	0:01	3:45	6:10	12:25	15:30	21:00			14,223
26	0:01	4:22	6:54	13:00	16:00	21:35			14,235
27	0:01	5:00	7:34	13:32	16:32	21:55			14,234
28	0:01	5:40	8:16	21:35					14,204
29	0:01	6:23	9:01	14:44	22:01	---			12,832
30	---	15:10	22:38	---					14,223
31	---	4:01	7:01	20:01	23:20	---			14,242
Total inflow for the month in AF:									411,092

Table 11. Governor Edmund G. Brown California Aqueduct

Delta Field Division, Monthly Deliveries

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver- sions	Deliveries					
	Beginning and Ending					Entitle- ment	USBR	Misc.	Loan Water	1997 Carryover Ent.	
	No.	Structure	Mile								
1	1	Banks Pumping Plant	3.32	Bethany Reservoir Inlet	409,354						
		South Bay Pumping Plant	4.49								16,864
		Check No. 1	5.95								
	2	Check No. 2	12.01								
	3		12.47	Musco Olive	5						5
		Check No. 3	18.29								
	4		22.16	Tracy Golf & Country Club	36						36
		Check No. 4	23.99								
		5	Check No. 5	29.73							
	6	Check No. 6	34.24								
			35.22	Turlock Fruit Company Inflow	0						
	7	Check No. 7	39.91								
			42.46	Oak Flat Water District-A	36						36
	8		43.81	Oak Flat Water District-B	328						328
			44.64	Oak Flat Water District-C	167						167
Check No. 8		45.97									
9		46.18	Oak Flat Water District-D	245	245						
			Oak Flat Totals:	776	776	0	0	0			
2B	10	Check No. 9	51.30								
		Check No. 10	56.86								
	11	Check No. 11	61.40								
	12		66.14	Veteran's Cemetery	5	5					
Check No. 12		66.71		377,784							

Table 12. South Bay Aqueduct

Delta Field Division, Monthly Deliveries

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diversions	Deliveries			
	Beginning and Ending					Entitlement	General Wheeling	Local	Recreation
	No.	Structure	Mile						
1	1	South Bay Pumping Plant	0.00	(into South Bay Aqueduct)	16,864	3			
			3.17	Granite - Vasco Rd. (Temp.)	0				
			3.18	Oakland Scavenger Zone 7	3				
	Check No. 1	3.91							
	2	Check No. 2	5.21						
2	3		7.21	Zone 7 Altamont	35	35	1,000		
		Check No. 3	9.49	Zone 7 Patterson Stored Exchange	0				
				Zone 7 Patterson Project Water	1,077	77			
4	4	Check No. 4	10.68						
	5	Check No. 5	12.29						
	6			13.55	Zone 7 Wente #1	289	289		
				14.16	Zone 7 Wente #2	127	127		
		Check No. 6	14.65						
	7			14.78	Zone 7 Arroyo Mocho	405	405		
		Check No. 7	16.38						
				16.57	Zone 7 Wente #3	35	35		
				16.69	Zone 7 Norman Nursery	6	6		
				16.70	Zone 7 Concannon Project Water	110	110		
Del Valle Branch Pipeline Junction		18.63		(Flow into Lake Del Valle)	47				
5	8	Deliveries through Del Valle Branch Pipeline		Arroyo Valle #1 & #2 Project Water	250	250			
				Arroyo Valle #1 & #2 Stored Exchange	0				
				Lake Del Valle Recreation	20				
				Zone 7 Wente #5	96	96			
				So. Livermore Project	2,022	2,022			
6			19.20	So. Livermore Inflow Released	45				
				So. Livermore Stored Exchanged	0				
			19.21	Zone 7 - Kalthrof Detjens	214	214			
7	La Costa Tunnel		22.50	ACWD Vallecitos	1,806	1,806			
			25.97	City of San Francisco San Antonio	0				
8	Mission Tunnel	28.97		ACWD - Bayside 1 & 2 Project Water:	2,508	2,508			
				Inflow Released	0				
				Stored Exchange:	0				
9	Santa Clara Pipeline	35.86		S.C.V.W.D. Meter	8,625	8,625			

Table 13. Lake Del Valle

Daily Operation

(in acre-feet except as noted)

Capacity: 77,106 ac-ft

August 1999

Date	Water Surface Elevation (feet)	Storage	Storage Change	Inflow			Outflow			Precipitation (inches)	
				Natural 1/ 3/	From South Bay Aqueduct	Arroyo Valle	South Bay Aqueduct	Recreation Deliveries 2/ 3/	Evaporation		Total Outflow 3/
Jul 31	699.50	37,486									
1	699.48	37,473	-13		0	0	0		11		0.00
2	699.43	37,439	-34		0	0	19		10		0.00
3	699.40	37,418	-21		0	0	51		12		0.00
4	699.19	37,276	-142		0	0	67		12		0.00
5	699.13	37,235	-41		0	0	41		11		0.00
6	699.08	37,201	-34		0	0	11		7		0.00
7	699.08	37,201	0		11	0	0		7		0.00
8	699.10	37,215	14		22	0	0		10		0.00
9	699.09	37,208	-7		14	0	16		11		0.00
10	699.05	37,181	-27		0	0	16		7		0.00
11	699.05	37,181	0		0	0	0		6		0.00
12	699.02	37,160	-21		0	0	0		7		0.00
13	699.00	37,147	-13		0	0	0		11		0.00
14	698.99	37,140	-7		0	0	0		10		0.00
15	698.95	37,113	-27		0	0	0		10		0.00
16	698.93	37,100	-13		0	0	0		20		0.00
17	698.90	37,079	-21		0	0	19		13		0.00
18	698.84	37,039	-40		0	0	34		13		0.00
19	698.78	36,998	-41		0	0	33		14		0.00
20	698.74	36,971	-27		0	0	19		12		0.00
21	698.71	36,951	-20		0	0	12		11		0.00
22	698.65	36,910	-41		0	0	14		12		0.00
23	698.62	36,890	-20		0	0	13		16		0.00
24	698.57	36,857	-33		0	0	29		18		0.00
25	698.55	36,843	-14		0	0	44		16		0.00
26	698.39	36,735	-108		0	0	59		17		0.00
27	698.26	36,648	-87		0	0	78		17		0.00
28	698.13	36,561	-87		0	0	79		13		0.00
29	698.00	36,474	-87		0	0	87		14		0.00
30	697.87	36,387	-87		0	0	72		10		0.00
31	697.80	36,340	-47		0	0	39		12		0.00
Total			-1,146	45	47	0	846	20	372	1,238	0.00

1/ Total inflow from stream gaging station above Lang Canyon and accretions/depletions.

2/ To East Bay Regional Park District.

3/ Not available on a daily basis.

NR=No Records

Table 14. Consolidated State-Federal O'Neill Forebay

Daily Operations

August 1999

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Capacity: 56,430 Acre-feet

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)				Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
				Pump In 1/	O'Neill Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	California Aqueduct	O'Neill Pumping Generating Plant (Generation)	Gianelli Pumping Generating Plant (Pumped)	Dos Amigos Pumping Plant	Deliveries 2/	
Jul 31	222.35	49,314										
1	221.45	46,941	-2,373	0	875	0	6,100	0	0	8,317	66	212
2	222.00	48,385	1,444	0	1,125	4,772	4,547	0	0	9,697	35	16
3	221.59	47,309	-1,076	0	1,189	3,310	4,564	0	0	9,724	68	187
4	221.07	45,944	-1,365	0	870	2,800	6,451	0	0	10,800	69	60
5	219.75	42,505	-3,439	0	701	2,666	4,855	0	0	10,138	58	240
6	222.00	48,385	5,880	0	738	6,504	6,243	0	0	10,422	61	-38
7	222.76	50,406	2,021	0	991	3,145	6,556	0	0	9,676	37	40
8	221.82	47,914	-2,492	0	1,247	0	6,549	0	1,852	7,070	34	-96
9	222.00	48,385	471	0	1,353	2,805	6,374	0	1,482	8,874	67	128
10	223.17	51,500	3,115	0	1,395	3,432	6,415	0	1,350	8,577	44	299
11	222.81	50,539	-961	0	1,200	2,010	6,221	0	1,348	8,824	44	301
12	222.47	49,634	-905	0	1,089	2,598	6,139	0	1,347	9,089	47	201
13	222.87	50,699	1,065	0	1,089	3,302	6,488	0	1,350	9,225	36	269
14	223.00	51,046	347	0	1,101	2,355	6,466	0	1,807	7,978	42	80
15	222.58	49,926	-1,120	0	1,334	17	5,931	0	1,316	6,633	42	144
16	222.52	49,767	-159	0	1,518	2,929	5,613	0	1,574	8,417	29	-120
17	222.88	50,726	959	0	1,373	2,983	6,273	0	1,362	8,734	46	-4
18	221.75	47,730	-2,996	0	964	1,750	6,326	0	1,373	9,238	48	109
19	221.74	47,703	-27	0	744	3,784	6,384	0	1,567	9,918	42	601
20	221.94	48,229	526	0	771	3,905	6,513	0	1,807	9,293	39	215
21	222.85	50,646	2,417	0	984	4,393	6,484	0	1,822	8,944	42	166
22	223.18	51,527	881	0	1,161	765	6,542	0	0	8,037	59	72
23	223.08	51,260	-267	0	1,091	3,312	5,322	0	2,195	7,979	46	360
24	222.21	48,942	-2,318	0	1,019	3,803	5,551	0	2,723	9,007	49	237
25	222.43	49,527	585	0	906	3,682	6,455	0	3,067	8,011	41	371
26	221.60	47,336	-2,191	0	916	2,306	6,592	0	2,823	8,476	41	421
27	223.03	51,126	3,790	0	1,204	3,683	6,657	0	1,573	8,215	41	196
28	223.88	53,404	2,278	0	1,426	2,532	6,560	0	2,023	7,574	28	255
29	223.93	53,538	134	0	1,718	503	6,385	0	3,545	5,295	31	333
30	223.22	51,634	-1,904	0	1,926	0	6,416	0	3,696	5,770	32	196
31	222.86	50,673	-961	0	1,738	0	6,490	0	2,808	6,219	40	355
Total			1,359	0	35,756	80,046	190,462	0	45,810	264,171	1,404	5,806
Mean cfs			- - -	0	1,153	2,582	6,144	0	1,478	8,522	45	187
Acre-feet			1,359	0	70,917	158,772	377,784	0	90,866	523,988	2,785	11,525

1/ Pump-in located at Mile 79.67R.

2/ Includes 225 AF delivered to DFG at O'Neill Forebay.

Table 15. Consolidated State-Federal San Luis Reservoir

Daily Operations

August 1999

United States
 Department of the Interior
 Bureau of Reclamation
 Central Valley Project

Capacity: 2,027,835 ac-ft

State of California
 The Resources Agency
 Department of Water Resources
 State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)				Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
				Gianelli Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	Pacheco Tunnel 1/	Parks and Rec. Del.	Gianelli Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	Pacheco Tunnel 1/	Parks and Rec. Del.	
Jul 31	410.83	611,617										
1	410.75	610,943	-674	0	0	263	0	-77				
2	409.57	601,030	-9,913	0	4,772	257	0	31				
3	408.73	594,011	-7,019	0	3,310	255	0	26				
4	408.00	587,936	-6,075	0	2,800	272	0	9				
5	407.28	581,967	-5,969	0	2,666	280	0	-63				
6	405.67	568,702	-13,265	0	6,504	281	0	97				
7	404.85	561,991	-6,711	0	3,145	278	0	40				
8	405.14	564,361	2,370	1,852	0	281	0	-376				
9	404.86	562,072	-2,289	1,482	2,805	279	0	448				
10	404.30	557,505	-4,567	1,350	3,432	176	0	-44				
11	404.11	555,959	-1,546	1,348	2,010	268	0	151				
12	403.71	552,709	-3,250	1,347	2,598	265	0	-123				
13	403.14	548,090	-4,619	1,350	3,302	264	0	-113				
14	402.90	546,149	-1,941	1,807	2,355	268	0	-163				
15	403.04	547,281	1,132	1,316	17	263	0	-465				
16	402.68	544,373	-2,908	1,574	2,929	273	0	162				
17	402.18	540,343	-4,030	1,362	2,983	278	0	-133				
18	402.01	538,975	-1,368	1,373	1,750	272	0	-41				
19	401.36	533,759	-5,216	1,567	3,784	274	0	-139				
20	400.74	528,800	-4,959	1,807	3,905	281	0	-121				
21	399.99	522,825	-5,975	1,822	4,393	274	0	-167				
22	399.72	520,680	-2,145	0	765	273	0	-43				
23	399.33	517,588	-3,092	2,195	3,312	288	0	-154				
24	398.86	513,870	-3,718	2,723	3,803	292	0	-502				
25	398.56	511,503	-2,367	3,067	3,682	483	0	-95				
26	398.66	512,292	789	2,823	2,306	300	0	181				
27	398.03	507,330	-4,962	1,573	3,683	297	0	-95				
28	397.72	504,895	-2,435	2,023	2,532	291	0	-428				
29	398.35	509,848	4,953	3,545	503	280	0	-265				
30	399.10	515,767	5,919	3,696	0	289	0	-423				
31	399.67	520,283	4,516	2,808	0	252	0	-279				
Total			-91,334	45,810	80,046	8,647	0	-3,164				
Mean cfs			- - -	1,478	2,582	279	0	-102				
Acre-feet			-91,334	90,866	158,772	17,156	0	-6,272				

1/ Pacheco Tunnel, San Felipe Split; Santa Clara: 13,193 AF, San Benito: 3,936 AF.

Table 16. San Luis Field Division Plant Data

(in acre-feet)

August 1999

Date	Dos Amigos Pumping Plant		Gianelli Pumping - Generating Plant				San Felipe Project
	Total Pumping	SWP Pumping 1/, 2/	Total Generation	SWP Generation 1/, 2/	Total Pumping	SWP Pumping 1/, 2/	Federal
1	16,497	10,877	0	0	0	0	521
2	19,234	13,718	9,465	5,069	0	0	510
3	19,288	13,672	6,566	3,961	0	0	505
4	21,422	15,780	5,554	2,385	0	0	539
5	20,109	14,509	5,289	2,148	0	0	556
6	20,673	15,182	12,900	4,887	0	0	558
7	19,192	13,720	6,238	1,930	0	0	551
8	14,024	8,553	0	0	3,674	3,674	557
9	17,602	12,367	5,564	3,331	2,939	2,939	554
10	17,013	11,689	6,807	2,760	2,678	2,678	349
11	17,503	12,057	3,987	1,147	2,674	2,674	532
12	18,028	12,665	5,153	1,345	2,671	2,671	526
13	18,298	12,901	6,550	2,702	2,678	2,678	523
14	15,824	10,845	4,672	1,634	3,584	3,584	532
15	13,157	8,190	33	33	2,610	2,610	522
16	16,695	12,305	5,810	2,446	3,122	3,122	542
17	17,324	12,824	5,916	2,538	2,701	2,701	551
18	18,324	13,822	3,471	2,828	2,724	2,724	540
19	19,672	15,245	7,505	5,952	3,109	3,109	544
20	18,432	14,962	7,746	5,175	3,584	3,584	558
21	17,740	14,254	8,713	4,887	3,613	3,613	544
22	15,942	12,345	1,517	1,517	0	0	541
23	15,826	14,520	6,569	6,569	4,353	4,353	572
24	17,865	16,527	7,544	7,544	5,402	3,801	580
25	15,890	14,584	7,303	7,303	6,084	1,817	958
26	16,813	16,813	4,574	4,574	5,600	3,025	596
27	16,294	16,294	7,306	7,306	3,120	3,120	589
28	15,024	15,024	5,022	5,022	4,012	3,316	578
29	10,502	10,502	998	998	7,032	3,477	555
30	11,445	7,622	0	0	7,332	5,764	574
31	12,336	8,367	0	0	5,570	5,570	499
Total	523,988	402,735	158,772	97,991	90,866	76,604	17,156

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping; adjustments to SWP water shares are made to balance the mismatch.

2/ Provisional, subject to change.

Table 17. Consolidated State-Federal Los Banos Reservoir

Daily Operations

August 1999

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

Capacity: 34,560 ac-ft

State of California
The Resources Agency
Department of Water Resources
State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Estimated Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft)
					Spill	Outlet	
Jul 31	327.78	20,566					
1	327.76	20,557	-9	0	0	0	-9
2	327.74	20,547	-10	0	0	0	-10
3	327.72	20,538	-9	0	0	0	-9
4	327.69	20,524	-14	0	0	0	-14
5	327.65	20,505	-19	0	0	0	-19
6	327.61	20,486	-19	0	0	0	-19
7	327.60	20,482	-4	0	0	0	-4
8	327.58	20,472	-10	0	0	0	-10
9	327.57	20,468	-4	0	0	0	-4
10	327.53	20,449	-19	0	0	0	-19
11	327.52	20,444	-5	0	0	0	-5
12	327.51	20,440	-4	0	0	0	-4
13	327.49	20,430	-10	0	0	0	-10
14	327.45	20,412	-18	0	0	0	-18
15	327.44	20,407	-5	0	0	0	-5
16	327.42	20,398	-9	0	0	0	-9
17	327.40	20,388	-10	0	0	0	-10
18	327.37	20,374	-14	0	0	0	-14
19	327.36	20,370	-4	0	0	0	-4
20	327.34	20,360	-10	0	0	0	-10
21	327.33	20,356	-4	0	0	0	-4
22	327.32	20,351	-5	0	0	0	-5
23	327.29	20,337	-14	0	0	0	-14
24	327.28	20,332	-5	0	0	0	-5
25	327.27	20,328	-4	0	0	0	-4
26	327.24	20,314	-14	0	0	0	-14
27	327.22	20,304	-10	0	0	0	-10
28	327.20	20,295	-9	0	0	0	-9
29	327.17	20,281	-14	0	0	0	-14
30	327.12	20,258	-23	0	0	0	-23
31	327.09	20,244	-14	0	0	0	-14
Total			-322	0	0	0	-322
Mean cfs			---	0	0	0	---
Acre-feet			-322	0	0	0	-322

Table 18. Consolidated State-Federal Little Panoche Reservoir

Daily Operations

August 1999

United States
 Department of the Interior
 Bureau of Reclamation
 Central Valley Project

Capacity: 5,580 ac-ft

State of California
 The Resources Agency
 Department of Water Resources
 State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft) 1/	Storage Change (ac-ft) 1/	Computed Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft)
					Spill	Outlet	
Jul 31	602.25	806					
1	Not Observed			2	0	2	0
2	Not Observed			2	0	2	0
3	Not Observed			2	0	2	0
4	Not Observed			2	0	2	0
5	Not Observed			2	0	2	0
6	602.25	806	0	2	0	2	0
7	Not Observed			2	0	2	0
8	Not Observed			2	0	2	0
9	Not Observed			2	0	2	0
10	Not Observed			2	0	2	0
11	Not Observed			2	0	2	0
12	Not Observed			2	0	2	0
13	602.20	803	-3	3	0	2	-5
14	Not Observed			2	0	2	0
15	Not Observed			2	0	2	0
16	Not Observed			2	0	2	0
17	Not Observed			2	0	2	0
18	Not Observed			2	0	2	0
19	Not Observed			2	0	2	0
20	602.20	803	0	2	0	2	0
21	Not Observed			2	0	2	0
22	Not Observed			2	0	2	0
23	Not Observed			2	0	2	0
24	Not Observed			2	0	2	0
25	Not Observed			2	0	2	0
26	Not Observed			2	0	2	0
27	602.20	803	0	2	0	2	0
28	Not Observed			2	0	2	0
29	Not Observed			2	0	2	0
30	Not Observed			2	0	2	0
31	602.20	803	0	2	0	2	0
Total			-3	63	0	62	---
Mean cfs			---	2	0	2	---
Acre-feet			-3	125	0	123	-5

1/ Not available on a daily basis

Table 19a. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries				
	Beginning and Ending					USBR	Transfer	DWR Recreation	USBR Recreation	
	No.	Structure	Mile							
2B	12	Check No. 12	66.71		377,784					
3	13	O'Neill Forebay		Department of Parks and Recreation	23			12	11	
		Outlet Check No. 13	70.85	Department of Fish & Game	225			124	101	
			70.91							
		Thru	85.08	San Luis Water District	2,560	2,560				
				(Floodwater Inflow)	0					
				Reach 3 Subtotal:	2,808	2,560	0	136	112	
		Dos Amigos Pumping Plant	86.73		523,988					
4	14		89.03							
		Thru	94.06	San Luis Water District	8,476	8,476				
			89.66							
		Thru	89.67	Pacheco Water District	1,306	1,306				
			89.68	Panoche Water District	5	5				
		89.70	City of Dos Palos	156	156					
		Check No. 14	95.06							
	15			98.15						
		Thru	104.20	San Luis Water District	330	330				
			96.15							
Thru		102.64	Panoche Water District	8,345	8,345					
		102.64	(Floodwater Inflow)	0						
			102.64	Broadview Water District	0	0				
			105.22							
		Thru	108.64	Westlands Water District	21,750	21,750				
		Check No.15	108.50							
				Pacheco Water District Total:	1,306	1,306	0	0	0	
				Broadview Water District Total:	0	0	0	0	0	
				City of Dos Palos Total:	156	156	0	0	0	
				SLWD Reach 4 Subtotal:	8,806	8,806	0	0	0	
				Panoche Water District Total:	8,350	8,350	0	0	0	
				SLWD Total:	11,366	11,366	0	0	0	
				Westlands WD Reach 4 Subtotal:	21,750	21,750	0	0	0	

Table 19b. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries (Continued)

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending					USBR	Transfer 1/	DWR Recreation	USBR Recreation		
	No.	Structure	Mile								
5	16		110.52	(Reverse flow, Kings River)	0	23,515		1			
			Thru	Westlands Water District	23,515						
			122.05	Department of Fish and Game	1						
		Check No. 16		122.07							
	17			124.18	Westlands Water District	19,341	10,841	8,500			
				Thru							132.74
		Check No. 17		132.95							
	18			133.81	Westlands Water District	21,207	21,207				
				Thru							142.61
					Pleasant Valley Pumping Plant	143.16	Westlands Water District	15,520	15,520		
					143.16	City of Coalinga	591	591			
	Check No. 18		143.23								
				Westlands WD Reach 5 Subtotal:	79,583	71,083	8,500	0	0		
6	19		145.26	Westlands Water District	29,404	628	28,776				
			Thru							151.19	
	Check No. 19		155.64								
				Westlands WD Reach 6 Subtotal:	29,404	628	28,776	0	0		
7	20		156.34	City of Huron	99	99					
			156.40	Westlands Water District	15,140	3,140	12,000				
			Thru							163.69	
		Check No. 20		164.69							
	21			164.79	City of Avenal	255	255				
				167.04	Westlands Water District	6,298	6,298				
Thru	171.67										
	Check No. 21		172.40		365,878						
				Reach 7 Total:	21,792	9,792	12,000	0	0		
				Westlands WD Total:	152,175	102,899	49,276	0	0		
				City of Coalinga Total:	591	591	0	0	0		
				City of Huron Total:	99	99	0	0	0		
				City of Avenal Total:	255	255	0	0	0		
				Phase I Water Total:	0	0	0	0	0		
Total San Luis Field Division Deliveries:					174,547	125,022	49,276	137	112		

1/ Includes 15,000 AF transferred to Westlands WD from MWD, and 33,276 AF from KCWA.

Table 20. Consolidated State-Federal San Luis Canal 1/

Daily Operations

August 1999

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Date	Storage In Canal (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)		Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
			Non- Project 2/	Dos Amigos Pumping Plant	San Luis Water Dist. 3/	Panoche Water District	Westlands Water Dist. 4/	Flow Past Check 21	
Jul 31	30,132								
1	29,356	-776	0	8,317	177	187	3,199	5,881	735
2	30,006	650	0	9,697	253	172	2,108	6,361	-475
3	29,665	-341	0	9,724	229	208	3,030	6,532	103
4	29,798	133	0	10,800	253	215	2,831	7,141	-293
5	29,375	-423	0	10,138	239	189	3,091	6,945	113
6	29,758	383	0	10,422	249	190	3,191	6,913	314
7	30,318	560	0	9,676	156	179	3,181	6,448	571
8	28,680	-1,638	0	7,070	186	190	3,175	5,388	1,044
9	29,577	897	0	8,874	250	101	2,403	5,664	-4
10	29,935	358	0	8,577	204	168	2,718	5,434	128
11	29,670	-265	0	8,824	233	169	2,543	5,928	-85
12	30,062	392	0	9,089	166	133	2,653	6,103	163
13	30,065	3	0	9,225	167	134	2,635	6,433	146
14	30,866	801	0	7,978	134	135	2,621	4,885	201
15	28,608	-2,258	0	6,633	161	142	2,697	5,816	1,044
16	29,133	525	0	8,417	192	155	1,786	6,052	33
17	28,802	-331	0	8,734	159	130	2,537	6,437	362
18	28,647	-155	0	9,238	118	131	2,448	6,473	-146
19	29,192	545	0	9,918	131	130	2,613	6,612	-157
20	29,299	107	0	9,293	132	130	2,592	6,558	172
21	30,013	714	0	8,944	130	129	2,765	5,965	405
22	29,977	-36	0	8,037	130	130	2,788	5,702	695
23	29,800	-177	0	7,979	178	104	1,779	5,937	-70
24	30,265	465	0	9,007	146	107	2,352	6,242	74
25	29,800	-465	0	8,011	177	107	2,307	5,940	286
26	29,729	-71	0	8,476	117	86	2,324	6,293	309
27	29,445	-284	0	8,215	113	86	2,323	5,768	-68
28	30,362	917	0	7,574	93	84	2,041	5,007	113
29	29,896	-466	0	5,295	113	86	2,009	4,043	721
30	29,381	-515	0	5,770	117	74	1,371	4,843	376
31	29,535	154	0	6,219	74	29	1,087	4,715	-236
Total		-597	0	264,171	5,177	4,210	77,198	184,461	6,572
Mean cfs		- - -	0	8,522	167	136	2,490	5,950	212
Acre-feet		-597	0	523,988	10,268	8,350	153,121	365,878	13,032

1/ San Luis Canal includes Pools 14 through 21 of the California Aqueduct.

2/ Pump In of Non-Project Water (0 AF @ Lat.7L) and Flood Water (0 AF) is included in the gain or loss

3/ Includes 1,305 AF AG & 1AF M&I to Pacheco W.D. and 156 AF to the City of Dos Palos.

4/ Includes 99 AF to the City of Huron, 255 AF to the City of Avenal, 591 AF to the City of Coalinga, 0 AF Phase I Water @ Lat. 13R, 0 AF to Broadview W.D., AND 1 af TO dfg @ wwd Lateral 4L.

Table 21. San Joaquin Field Division Plant Data

August 1999

(in acre-feet)

Date	Coastal Aqueduct					California Aqueduct			
	Las Perillas Pumping Plant	Badger Hill Pumping Plant	Devil's Den Pumping Plant	Bluestone Pumping Plant	Polonio Pass Pumping Plant	Buena Vista Pumping Plant	Teerink Pumping Plant	Chrisman Pumping Plant	Edmonston Pumping Plant
1	620	620	78	78	76	3,908	3,584	3,445	3,330
2	600	600	79	82	84	3,973	3,470	3,150	3,077
3	647	647	77	78	79	4,197	3,602	3,327	3,166
4	638	638	103	103	103	4,609	4,017	3,680	3,427
5	619	619	102	104	99	4,508	3,898	3,648	3,549
6	673	673	91	91	93	4,357	3,813	3,547	3,398
7	514	514	91	91	93	4,047	3,468	3,374	3,236
8	513	513	70	72	74	3,563	3,291	3,156	2,954
9	618	618	91	91	91	3,125	2,653	2,475	2,419
10	616	616	84	86	88	3,142	2,607	2,319	2,236
11	618	618	83	85	86	4,524	4,055	3,815	3,663
12	645	645	91	91	93	4,924	4,411	4,131	3,970
13	610	610	110	110	110	4,844	4,199	4,021	3,897
14	500	500	91	91	93	4,062	3,798	3,543	3,451
15	404	404	76	78	80	3,780	3,346	3,268	3,113
16	542	542	97	96	98	4,367	4,001	3,763	3,666
17	542	542	82	82	83	4,255	3,624	3,366	3,228
18	542	542	87	86	87	4,856	4,332	4,039	3,967
19	503	503	103	103	105	5,032	4,411	4,233	3,967
20	536	536	105	106	108	4,512	4,136	3,825	3,768
21	508	508	73	76	76	4,139	3,540	3,396	3,207
22	457	457	91	91	94	4,240	3,950	3,852	3,698
23	546	546	89	91	91	4,369	4,057	3,826	3,696
24	533	533	91	92	93	4,663	4,051	3,863	3,787
25	494	494	108	110	112	4,399	4,276	4,046	3,867
26	386	386	64	67	69	4,813	4,197	3,972	3,854
27	532	532	106	101	107	4,455	4,107	3,844	3,701
28	478	478	73	69	77	3,837	3,558	3,417	3,239
29	474	474	82	75	83	4,229	3,870	3,718	3,518
30	510	510	74	68	75	4,161	4,061	3,864	3,784
31	461	461	77	71	76	4,647	4,236	4,046	3,889
Total	16,879	16,879	2,719	2,715	2,776	132,537	118,619	111,969	107,722

Table 22a. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending					Entitle-ment	Transfer	Purchase Pool A	Exchange	USBR	
	No.	Structure	Mile								
7	21	Check No. 21	172.40		365,878						
8C	22		172.66	Empire West Side Irrig. Dist. TL - A	629	629					
				County of Kings TL - A	500	500					
				TLBWSD TL-A	13,365	9,169	200	3,996			
8D			175.18	DRWD - 1	979	979					
			177.54	DRWD - 1B	554	554					
			180.64	TLBWSD - C	0						
			180.65	DRWD - 1A	963	963					
			182.99	DRWD - 2	5,434	5,434					
31A			183.00	Tulare Lake Basin WSD TL - B	20,049	12,161		5,888	2,000		
			184.63	Coastal Branch	16,879						
8D			184.78	Dudley Ridge Water Dist. DRWD - 3	2,676	1,670		1,006			
				Dudley Ridge Reach 8D Total:	10,606	9,600	0	1,006	0	0	
				Tulare Lake Basin WSD Total:	33,414	21,330	200	9,884	2,000	0	
		Check No. 22	184.82								
9	23		189.69	Kern County Water Agency Lost Hills Water Dist. - 1	6,467	6,467					
			191.18	Kern County Water Agency Lost Hills Water Dist. - 2	2,720	2,720					
			194.22	Kern County Water Agency Lost Hills Water Dist. - 3	2,142	2,142					
			196.40	Kern County Water Agency Berrenda Mesa - 2	0						
			196.75	Kern County Water Agency Lost Hills Water Dist. - 4	2,427	2,427					
				K.C.W.A. Reach 9 Subtotal:	13,756	13,756	0	0	0	0	
		Check No. 23	197.05								
10A	24		201.24	Kern County Water Agency Lost Hills Water Dist. - 7	1,304	1,304					
			202.05	Kern County Water Agency Lost Hills Water Dist. - 5	3,928	3,928					
			204.69	Kern County Water Agency Lost Hills Water Dist. - 6	0						
			205.26	Kern County Water Agency Lost Hills Water Dist. - 8	0						
			Check No. 24	207.94							
	25			209.71	Kern County Water Agency Belridge Water Storage Dist. - 1A	1,363	1,363				
				209.78	Kern National Wildlife Refuge USBR BV-1B	1,857					1,857
				209.80	Kern County Water Agency Buena Vista WSD 1B	215	215				
				KCWA Semitropic WSD	24,697	24,697					
				KCWA Semitropic WSD Penstocks	15,629	15,629					
				USBR Total:	1,857	0	0	0	0	1,857	
				K.C.W.A. Reach 10A Subtotal:	47,136	47,136	0	0	0	0	

Table 22b. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending					Entitle-ment	Inter-ruptible Ent.	Purchase Pool B	Exchange	Fed. Whling	
	No.	Structure	Mile								
11B	25		210.75	Kern County Water Agency Belridge - 2	0	1,228					
			214.11	Kern County Water Agency Belridge - 3	1,228						
			216.62	Kern County Water Agency Belridge - 4	0						
			217.13	Kern County Water Agency Belridge - 5	11,575						
				Kern County Water Agency Belridge - 5D	218						
		Check No. 25	217.79								
				K.C.W.A. Reach 11B Subtotal:	13,021	13,021	0	0	0	0	
12D	26		219.58	Kern County Water Agency Belridge - 6	0						
		Check No. 26	224.92								
12E	27		230.37	Kern County Water Agency Buena Vista - 6	3,864	3,864					
		Check No. 27	231.73								
	28			235.75	Kern County Water Agency Buena Vista - 2	9,116	9,116				1,544
				238.04	Kern County WA CVC	1,544					
					DRWD CVC	45,341					
					Tulare Co.	0					
					Lower Tule River	0					
					Fresno Co.	0					
					Pixley ID	0					
	Check No. 28	238.11									
				1/ Arvin Edison Total:	0	0	0	0	0		
				Reach 12E Subtotal:	59,865	58,321	0	0	0	1,544	
13B	29		241.02	Kern River Intertie (inflow)	0	16,499					
			242.85	KCWA Buena Vista WSD - 7	16,499						
				KCWA Buena Vista WSD - 5	1,377						
			243.09	Kern County Water Agency Buena Vista - 3	6,632						
	Check No. 29	244.54	Buena Vista WSD	0							
	30			249.85	Kern County Water Agency Buena Vista - 4	2,180	305		1,875		
Buena Vista Pumping Plant		250.99		132,537							
				K.C.W.A. Reach 13B Subtotal:	26,688	24,813	0	1,875	0	0	
14A	31		254.47	Kern County Water Agency West Kern - 2	0	94					
			256.11	Kern County Water Agency Wheeler Ridge-Maricopa - 2	94						

1/ Arvin Edison Contractors include Rag Gulch WD, Kern-Tulare WD, Fresno County, Hills Valley ID, Tri Valley WD, Tulare County, Lower Tule River ID, and Pixley ID.

Table 22c. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries				
	Beginning and Ending					Entitle-ment	Inter-ruptible Ent.	MWD Ent. Exch.	Exchange	MWD Ent.
	No.	Structure	Mile							
14A	31	Check No. 31	256.14							
	32		258.61	Kern County Water Agency Wheeler Ridge-Maricopa - 3	926	926				
			260.44	Kern County Water Agency Wheeler Ridge-Maricopa - 4	2,226					
		Check No. 32	261.72							
KCWA Reach 14A Subtotal:					3,246	3,246	0	0	0	0
14B	33		264.42	Kern County Water Agency Wheeler Ridge-Maricopa - 5	4,765	4,765				
			266.91	Kern County Water Agency Wheeler Ridge-Maricopa - 6	695					
		Check No. 33	267.36							
	34		270.24	Kern County Water Agency Wheeler Ridge-Maricopa - 7	4,661	4,661				
		Check No. 34	271.27							
Reach 14B Total:					10,121	10,121	0	0	0	0
14C	35		272.39	Kern County Water Agency Wheeler Ridge-Maricopa - 8	2,645	2,645				
			276.09	Kern County Water Agency Wheeler Ridge-Maricopa - 9	838					
		Reach 14C Total:			3,483					
15A		Teerink Pumping Plant	278.13		118,619					
	36		279.02	Kern County Water Agency Wheeler Ridge-Maricopa - 9A	590	590				
			280.06	Kern County Water Agency Wheeler Ridge-Maricopa - 10	4,323					
		Reach 15-A Total:			4,913					
			Chrisman Pumping Plant	280.36		111,969				
37		282.06	Kern County Water Agency Wheeler Ridge-Maricopa - 11	0						
	Check No. 37	283.95								
38			285.01	Kern County Water Agency Wheeler Ridge-Maricopa - 12	0	285				
			286.39	Kern County Water Agency Wheeler Ridge-Maricopa - 13A	285					
			287.06	Kern County Water Agency Wheeler Ridge-Maricopa - 13	0					
	Check No. 38	287.09								
39			287.62	Kern County Water Agency Wheeler Ridge-Maricopa - 13B	273	273				
	Check No. 39	290.21								
40			291.26	Kern County Water Agency Wheeler Ridge-Maricopa - 14	1,928	1,928				
			293.07	Kern County Water Agency Wheeler Ridge-Maricopa - 15	520					
				Kern County Water Agency Tehachapi Cummings CWD	1,316					
	K.C.W.A. Reach 16A Subtotal:			4,322	4,322					
17E		Edmonston Pumping Plant	293.45		107,722					

Table 23. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Coastal Branch)

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries									
	Beginning and Ending					Entitle-ment	Inter-ruptible Ent.	Purchase Pool B	Exchange	Fed. Whling					
	No.	Structure	Mile												
31A	C-1	Coastal Branch Control	0.02		16,879	47									
		Las Perillas Pumping Plant	1.16		16,879										
	C-2		3.79	Green Valley Water District	0										
		Badger Hill Pumping Plant	4.27		16,879										
	C-3	Coastal Check No. 3	7.21												
	C-4		9.34	Castaic Lake WA (Devil's Den WD #1)	47										
		Coastal Check No. 4	9.34												
	C-5	Coastal Check No. 5	12.20												
	C-6		13.30	Kern County Water Agency Berrenda Mesa - 3	1,505						11,915	1,505			
			14.83	Kern County Water Agency Berrenda Mesa - DD	0										
				Kern County Water Agency Berrenda Mesa - PO	11,915										
		Devil's Den Pumping Plant	14.86		2,719										
			K.C.W.A. Reach 31A Subtotal:	13,420	13,420	0	0	0	0						
			K.C.W.A. Total:	198,096	196,552	0	1,875	0	1,544						
33A	C-7	Bluestone Pumping Plant	19.05		2,715	2,458									
	C-8	Polonio Pass Pumping Plant	26.54		2,776										
	C-9	Tank Site 1	27.81	(CCWA) Polonio Pass Treatment Plant											
	C-10	Shandon T.O.	38.23	Santa Barbara County (CCWA)	2,458										
		Tank Site 2	58.63	Central Coast:	0										
	C-11	Chorro Valley T.O.	69.31	San Luis Obispo County (CCWA)	390										
34		Lopez T.O.	85.86	SLOCFC & WCD	0	2,848	0	0	0	0					
				CCWA Total:	2,848										
35	C-12	Guadalupe T.O.	102.70	SBCFC & WCD	0	0	0	0	0	0					
		Santa Maria T.O.	107.43	SBCFC & WCD	0										
		So. Cal. Water T.O.	109.20	SBCFC & WCD	0										
38				SBCFC & WCD Total:	0	0	0	0	0						
		Tank Site 5	115.42												

Table 24. Southern Field Division Plant Data

(in acre-feet)

August 1999

Date	West Branch					East Branch							
	Oso Pumping Plant	Warne Powerplant		Castaic Powerplant		Alamo Powerplant			Pearblossom Pumping Plant	Mojave Siphon Powerplant			Devil Canyon Powerplant Generation
		Generation	Leakage	Generation	Pumpback	Generation	Bypass Through Plant	Cottonwood Chute		Generation	Leakage	Bypass Flume	
1	1,207	764	0	0	7,053	2,028	0	0	1,666	1,528	0	0	1,767
2	826	1,034	0	5,211	5,117	1,939	0	259	1,738	1,688	0	0	1,541
3	1,022	965	0	6,325	3,616	2,146	0	0	1,713	1,962	0	0	1,532
4	938	1,101	0	4,740	4,245	1,967	0	405	1,877	1,843	0	0	1,931
5	1,227	1,105	0	5,817	2,589	1,967	0	64	2,132	2,028	0	0	2,163
6	981	1,095	0	4,579	3,039	1,918	0	377	1,730	1,945	0	0	1,852
7	969	1,100	0	3,105	4,674	1,792	0	401	1,651	1,961	0	0	1,925
8	810	0	146	465	6,047	2,236	0	0	1,586	1,697	0	0	1,528
9	163	0	0	5,905	3,214	1,959	0	84	1,739	1,772	0	0	1,701
10	145	122	0	6,165	2,008	1,867	0	137	1,691	1,771	0	0	2,020
11	1,192	1,501	0	6,057	6,372	1,967	0	436	1,879	1,892	0	0	2,139
12	1,378	1,579	0	8,421	6,226	1,746	0	423	1,996	1,667	0	0	2,296
13	1,282	1,763	0	10,245	5,614	2,297	0	326	2,217	2,334	0	0	2,191
14	1,315	1,730	0	2,142	5,157	1,874	0	263	1,639	1,620	0	0	2,052
15	878	120	0	2,325	6,820	2,229	0	0	1,778	1,880	0	0	2,010
16	1,001	1,437	0	7,318	3,600	2,204	0	471	2,223	2,062	0	0	2,296
17	1,429	1,279	0	5,725	2,797	1,716	0	72	1,643	1,753	0	0	2,139
18	1,159	1,269	0	8,228	4,968	2,403	0	358	1,873	1,930	0	0	2,058
19	1,178	1,313	0	7,038	3,288	2,141	0	756	2,128	2,077	0	0	2,159
20	1,101	1,313	0	4,544	3,187	2,100	0	388	2,174	2,337	0	0	2,201
21	1,254	1,302	0	252	2,650	1,774	0	214	1,487	1,580	0	0	2,039
22	1,443	495	0	240	5,337	2,153	0	0	1,907	1,805	0	0	1,985
23	961	1,315	0	4,784	2,028	2,123	0	451	2,232	2,071	0	0	2,314
24	1,098	1,305	0	6,150	3,206	2,164	0	469	2,309	1,965	0	460	2,202
25	1,117	1,331	0	8,680	5,939	2,211	0	482	2,171	2,043	0	0	2,075
26	1,118	1,357	0	6,737	5,505	2,261	0	416	2,166	2,269	0	0	2,252
27	1,008	1,238	0	6,145	2,883	2,158	0	377	2,039	2,166	0	0	2,030
28	1,195	1,453	0	826	4,107	1,779	0	273	1,534	1,573	0	0	1,602
29	1,467	381	0	136	4,766	1,569	0	415	1,650	2,204	0	0	1,519
30	1,113	1,255	0	5,978	3,336	1,530	0	1,064	2,196	2,102	0	0	1,999
31	1,099	1,254	0	5,268	3,995	2,341	0	369	2,296	2,105	0	0	2,312
Total	33,074	33,276	146	149,551	133,383	62,559	0	9,750	59,060	59,630	0	460	61,830

Table 25. Pyramid Lake
Daily Operation

Capacity: 171,200 ac-ft

(in acre-feet except as noted)

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow			Computed Losses (-) Gains (+)
				Project		Natural	Project		Natural	
				Castaic Powerplant Pumpback	Warne Powerplant	Stream Flow	Castaic Powerplant Generation	Recreation Deliveries	To Piru Creek	
Jul 31	2565.63	154,418								
1	2571.99	162,258	7,840	7,053	764	20	0	0	50	53
2	2572.42	162,797	539	5,117	1,034	20	5,211	0	50	-371
3	2570.85	160,834	-1,963	3,616	965	19	6,325	0	50	-188
4	2571.20	161,271	437	4,245	1,101	20	4,740	0	50	-139
5	2569.34	158,961	-2,310	2,589	1,105	20	5,817	1	50	-156
6	2568.88	158,393	-568	3,039	1,095	20	4,579	0	50	-93
7	2571.02	161,046	2,653	4,674	1,100	20	3,105	0	50	14
8	2575.44	166,617	5,571	6,047	146	20	465	0	50	-127
9	2573.26	163,854	-2,763	3,214	0	19	5,905	0	50	-41
10	2569.83	159,567	-4,287	2,008	122	18	6,165	0	50	-220
11	2571.14	161,196	1,629	6,372	1,501	19	6,057	1	64	-142
12	2570.18	160,001	-1,195	6,226	1,579	18	8,421	0	63	-534
13	2567.12	156,232	-3,769	5,614	1,763	18	10,245	0	50	-869
14	2570.97	160,984	4,752	5,157	1,730	18	2,142	0	50	39
15	2574.56	165,498	4,514	6,820	120	17	2,325	0	50	-68
16	2572.60	163,023	-2,475	3,600	1,437	17	7,318	1	50	-160
17	2570.99	161,009	-2,014	2,797	1,279	16	5,725	0	50	-331
18	2568.91	158,430	-2,579	4,968	1,269	16	8,228	0	50	-554
19	2566.51	155,488	-2,942	3,288	1,313	15	7,038	0	50	-470
20	2566.27	155,196	-292	3,187	1,313	15	4,544	1	50	-212
21	2569.68	159,010	3,814	2,650	1,302	14	252	0	50	150
22	2573.82	164,561	5,551	5,337	495	14	240	0	50	-5
23	2572.55	162,960	-1,601	2,028	1,315	15	4,784	0	50	-125
24	2571.02	161,046	-1,914	3,206	1,305	15	6,150	0	50	-240
25	2569.19	158,776	-2,270	5,939	1,331	15	8,680	1	50	-824
26	2568.90	158,418	-358	5,505	1,357	16	6,737	0	50	-449
27	2566.62	155,622	-2,796	2,883	1,238	16	6,145	0	50	-738
28	2570.20	160,026	4,404	4,107	1,453	16	826	0	50	-296
29	2574.13	164,953	4,927	4,766	381	16	136	0	50	-50
30	2573.36	163,980	-973	3,336	1,255	16	5,978	0	50	448
31	2573.19	163,766	-214	3,995	1,254	16	5,268	0	50	-161
Total			9,348	133,383	33,422	534	149,551	5	1,577	-6,859

Table 26. Elderberry Forebay

Daily Operation

(in acre-feet except as noted)

Capacity: 32,746 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow			Computed Losses (-) Gains (+)
				Castaic Powerplant Generation	Natural	Castaic Powerplant Pumpback	To Castaic Lake		
							Natural	Project	
Jul 31	1533.65	29,394							
1	1518.06	22,421	-6,973	0	0	7,053	0	0	80
2	1518.90	22,774	353	5,211	0	5,117	0	0	259
3	1520.53	23,467	693	6,325	0	3,616	0	2,016	0
4	1521.87	24,044	577	4,740	0	4,245	0	0	82
5	1522.74	24,422	378	5,817	0	2,589	0	2,849	-1
6	1526.13	25,919	1,497	4,579	0	3,039	0	0	-43
7	1522.61	24,365	-1,554	3,105	0	4,674	0	0	15
8	1509.02	18,809	-5,556	465	0	6,047	0	0	26
9	1515.89	21,523	2,714	5,905	0	3,214	0	0	23
10	1520.36	23,394	1,871	6,165	0	2,008	0	2,284	-2
11	1520.01	23,245	-149	6,057	0	6,372	0	0	166
12	1520.63	23,510	265	8,421	0	6,226	0	1,928	-2
13	1527.44	26,509	2,999	10,245	0	5,614	0	1,610	-22
14	1520.62	23,505	-3,004	2,142	0	5,157	0	0	11
15	1509.86	19,130	-4,375	2,325	0	6,820	0	0	120
16	1519.21	22,905	3,775	7,318	0	3,600	0	0	57
17	1520.64	23,514	609	5,725	0	2,797	0	2,319	0
18	1529.01	27,225	3,711	8,228	0	4,968	0	0	451
19	1531.25	28,263	1,038	7,038	0	3,288	0	2,712	0
20	1531.96	28,595	332	4,544	0	3,187	0	1,027	2
21	1526.57	26,116	-2,479	252	0	2,650	0	0	-81
22	1514.76	21,063	-5,053	240	0	5,337	0	0	44
23	1521.41	23,845	2,782	4,784	0	2,028	0	0	26
24	1522.39	24,269	424	6,150	0	3,206	0	2,521	1
25	1523.95	24,952	683	8,680	0	5,939	0	2,060	2
26	1527.57	26,568	1,616	6,737	0	5,505	0	0	384
27	1529.20	27,312	744	6,145	0	2,883	0	2,517	-1
28	1522.52	24,326	-2,986	826	0	4,107	0	0	295
29	1511.51	19,770	-4,556	136	0	4,766	0	0	74
30	1516.75	21,877	2,107	5,978	0	3,336	0	0	-535
31	1515.34	21,299	-578	5,268	0	3,995	0	1,582	-269
Total			-8,095	149,551	0	133,383	0	25,425	1,162

Table 27. Castaic Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 323,699 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow		Computed Losses (-) Gains (+)
				From Elderberry Forebay		Natural	Deliveries	Released To Castaic Lagoon	
				Natural	Project				
Jul 31	1496.72	284,346							
1	1496.21	283,290	-1,056	0	0	0	947	0	-109
2	1495.76	282,361	-929	0	0	0	983	0	54
3	1496.28	283,435	1,074	0	2,016	0	1,136	0	194
4	1495.77	282,382	-1,053	0	0	0	1,039	0	-14
5	1496.65	284,201	1,819	0	2,849	1	1,002	0	-29
6	1496.20	283,270	-931	0	0	0	898	0	-33
7	1495.75	282,341	-929	0	0	0	895	0	-34
8	1495.29	281,393	-948	0	0	0	934	0	-14
9	1494.84	280,468	-925	0	0	0	989	0	64
10	1495.56	281,949	1,481	0	2,284	1	906	0	102
11	1495.08	280,961	-988	0	0	0	866	0	-122
12	1495.80	282,444	1,483	0	1,928	0	856	81	492
13	1496.43	283,745	1,301	0	1,610	0	875	80	646
14	1495.98	282,815	-930	0	0	1	896	0	-35
15	1495.59	282,011	-804	0	0	0	806	0	2
16	1495.14	281,085	-926	0	0	0	845	0	-81
17	1495.92	282,692	1,607	0	2,319	0	993	0	281
18	1495.44	281,702	-990	0	0	0	916	0	-74
19	1496.44	283,766	2,064	0	2,712	0	947	0	299
20	1496.50	283,890	124	0	1,027	1	947	0	43
21	1496.05	282,960	-930	0	0	0	883	0	-47
22	1495.63	282,093	-867	0	0	0	840	0	-27
23	1495.21	281,229	-864	0	0	0	848	0	-16
24	1496.05	282,960	1,731	0	2,521	1	913	0	122
25	1496.92	284,760	1,800	0	2,060	0	976	0	716
26	1496.44	283,766	-994	0	0	0	981	0	-13
27	1497.43	285,818	2,052	0	2,517	0	1,127	0	662
28	1496.76	284,428	-1,390	0	0	1	1,170	0	-221
29	1496.28	283,435	-993	0	0	0	999	0	6
30	1495.83	282,506	-929	0	0	0	894	0	-35
31	1496.19	283,249	743	0	1,582	0	894	0	55
Total			-1,097	0	25,425	6	29,201	161	2,834

Table 28. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (West Branch)

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver- sions	Deliveries					
	Beginning and Ending		Mile			Entitle- ment	Rec.	Local	Purchase Pool B	CLWA T1	
	No.	Structure									
29A	42	Oso Pumping Plant	1.49		33,074						
29F	W2	Quail Lake	5.02	Antelope Valley-East Kern Water Agency	Re- moved						
		Quail Lake Embankment	7.82	Antelope Valley-East Kern Water Agency	Stub						
29G		Warne Power Plant	14.07	(Does not include 146 AF leakage)	33,276						
29H	W3	Pyramid Lake		Calif. State Park Pyramid Recreation	5		5				
		Pyramid Dam	17.10	Piru Creek Fish Enhancement	0						
29J	W4	Castaic Power Plant	25.82	(133,383 AF pumpback)	149,551						
		Elderberry Forebay									
30 1/	W5	Castaic Lake		Calif. State Park Castaic Lake Recreation	51		51				
		Castaic Dam	31.47								
		Castaic Lake Outlet	MWD - 78"		0			25,209			
			MWD - 132"		27,937						2,728
			MWD-Castaic Lake WA - T1		-2,728						-2,728
			Castaic Lake WA - T1		2,728		2,728				
			Castaic Lake WA		1,059		1,059				
			United Water Conservation Dist.		0						
			MWD - Ventura County FCD		154		154				
			LA Co. Parks & Recreation		0						
Releases to Lagoon		164									
Reach 30 Subtotal:					29,201	29,150	51	0	0	0	
W6	Castaic Lagoon			Recreation to Lagoon	315		315				
	Castaic Lagoon Outlet	31.87			116						

1/ Reach 30 actually terminates at mile 31.50. It is shown here as including the outlet works at mile 31.55.

All deliveries from the outlet works and from the Lagoon are billed to Reach 30.

Table 29. Silverwood Lake

Daily Operation
(in acre-feet except as noted)

Capacity: 74,970 ac-ft

August 1999

Date	Water Surface Elev. (in feet)	Storage	Storage Change	Inflow			Outflow					Computed Losses (-) Gains (+)	Las Flores Ranch Exchange 1/
				Mojave Siphon Power-plant	Mojave Bypass Flume	Natural Stream Inflow	Project			Del. To Mojave W.A.	Natural To Mojave River		
							Delivered to CLAWA	Rec.	San Bernardino Tunnel				
Jul 31	3351.41	71,511											
1	3351.14	71,254	-257	1,528	0	0	6	0	1,767	0	0	-12	2
2	3351.26	71,368	114	1,688	0	0	6	0	1,541	0	0	-27	2
3	3351.58	71,672	304	1,962	0	0	6	0	1,532	0	1	-119	2
4	3351.57	71,663	-9	1,843	0	0	6	1	1,931	0	0	86	2
5	3351.30	71,406	-257	2,028	0	0	6	0	2,163	0	0	-116	2
6	3351.41	71,511	105	1,945	0	0	6	0	1,852	0	1	19	2
7	3351.41	71,511	0	1,961	0	0	5	0	1,925	0	0	-31	2
8	3351.40	71,501	-10	1,697	0	0	4	0	1,528	0	0	-175	2
9	3351.54	71,634	133	1,772	0	0	3	1	1,701	0	1	67	2
10	3351.26	71,368	-266	1,771	0	0	4	0	2,020	0	0	-13	2
11	3350.97	71,093	-275	1,892	0	0	4	0	2,139	0	0	-24	1
12	3350.42	70,572	-521	1,667	0	0	4	0	2,296	0	1	113	1
13	3350.45	70,601	29	2,334	0	0	6	0	2,191	0	0	-108	2
14	3350.06	70,233	-368	1,620	0	0	5	1	2,052	0	0	70	2
15	3349.93	70,111	-122	1,880	0	0	6	0	2,010	0	1	15	2
16	3349.68	69,876	-235	2,062	0	0	6	0	2,296	0	0	5	2
17	3349.26	69,482	-394	1,753	0	0	6	0	2,139	0	0	-2	2
18	3349.20	69,425	-57	1,930	0	0	5	1	2,058	0	1	78	2
19	3349.21	69,435	10	2,077	0	0	5	0	2,159	0	0	97	1
20	3349.21	69,435	0	2,337	0	0	4	0	2,201	0	0	-132	1
21	3348.81	69,061	-374	1,580	0	0	5	1	2,039	0	1	92	1
22	3348.33	68,614	-447	1,805	0	0	6	0	1,985	0	0	-261	1
23	3348.42	68,698	84	2,071	0	0	6	0	2,314	0	0	333	1
24	3348.51	68,781	83	1,965	460	0	5	1	2,202	0	1	-133	1
25	3348.57	68,837	56	2,043	0	0	6	0	2,075	0	0	94	1
26	3348.48	68,753	-84	2,269	0	0	6	0	2,252	0	0	-95	1
27	3348.65	68,912	159	2,166	0	0	6	0	2,030	0	1	30	1
28	3348.60	68,865	-47	1,573	0	0	5	1	1,602	0	0	-12	1
29	3349.34	69,557	692	2,204	0	0	7	0	1,519	0	0	14	1
30	3349.28	69,500	-57	2,102	0	0	7	0	1,999	0	1	-152	1
31	3349.15	69,379	-121	2,105	0	0	6	1	2,312	0	0	93	2
Total			-2,132	59,630	460	0	168	8	61,830	0	10	-206	48

1/ Project water delivered from Mojave Siphon in exchange for like amount of Natural Streamflow.

Table 30. Lake Perris

Daily Operation

(in acre-feet except as noted)

Capacity: 131,452 ac-ft

August 1999

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow 1/	Outflow 2/	Computed Losses (-) Gains (+) 1/
Jul 31	1587.58	125,880				
1	1587.56	125,834	-46		12	
2	1587.58	125,880	46		12	
3	1587.58	125,880	0		12	
4	1587.57	125,857	-23		12	
5	1587.57	125,857	0		12	
6	1587.56	125,834	-23		12	
7	1587.53	125,766	-68		12	
8	1587.53	125,766	0		11	
9	1587.54	125,789	23		12	
10	1587.53	125,766	-23		11	
11	1587.53	125,766	0		12	
12	1587.51	125,720	-46		12	
13	1587.47	125,629	-91		12	
14	1587.47	125,629	0		12	
15	1587.45	125,583	-46		11	
16	1587.45	125,583	0		12	
17	1587.45	125,583	0		12	
18	1587.45	125,583	0		11	
19	1587.45	125,583	0		12	
20	1587.45	125,583	0		11	
21	1587.45	125,583	0		12	
22	1587.45	125,583	0		12	
23	1587.44	125,560	-23		11	
24	1587.44	125,560	0		12	
25	1587.44	125,560	0		12	
26	1587.44	125,560	0		11	
27	1587.43	125,537	-23		12	
28	1587.43	125,537	0		12	
29	1587.43	125,537	0		12	
30	1587.41	125,492	-45		12	
31	1587.43	125,537	45		12	
Total			-343	1,134	365	-1,112

1/ Readings are not taken on a daily basis. End of month only.

2/ Includes deliveries to MWD from Reach 28J and recreation water to California State Park at lake Perris.

Table 31a. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (East Branch)

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries				
	Beginning and Ending					Entitle-ment	Rec.	Transfer	Purchase Pool B	Transfer Local Out
	No.	Structure	Mile							
17E	40	Edmonston Pumping Plant	293.45		107,722					
	41		298.65	Kern County Water Agency Tej.-Cas	Stub					
17F		Check No. 41	303.41							
18A	42	Check No. 42	304.99							
19		Alamo Powerplant	305.73	(Does not include 9,750 AF flow down Cottonwood Chute)	62,559	94	4,153	208	0	0
			308.05	Antelope Valley-East Kern WA	0					
	43	Check No. 43	309.70							
	44		311.84	LADWP Connection	0					
			313.50	AVEK 245th Street West	0					
		Check No. 44	314.81							
	45		314.93	AVEK 235th Street West	94					
			315.57	AVEK 225th Street West	0					
		Check No. 45	319.74							
	46		323.19	Antelope Valley-East Kern WA Fairmont	4,361					
	Check No. 46	323.84								
			Reach 19 Total:	4,455	4,247	0	208	0	0	
20A	47	Check No. 47	326.77			96				
	48		326.91	Antelope Valley-East Kern WA Willow Springs Siphon	96					
			329.65	Antelope Valley-East Kern WA 120th Street West	Re-moved					
		Check No. 48	330.82							
49	Check No. 49	335.93								
	50		336.73	AVEK WA - Quartz Hill (Wheeled for Palmdale WD)	55	55	4,148			
				Antelope Valley-East Kern WA	4,148					
		Check No. 50	341.51							
20B	51	Check No. 51	342.07			2,198				
	52		342.80	Antelope Valley-East Kern WA 30th Street West	Not in Use					
			Check No. 52	343.74						
53			346.98	PWD Palmdale	2,198					
			348.14	Antelope Valley-East Kern WA Acton Treatment Plant	2					
		Check No. 53	348.17							
21	54	Check No. 54	350.25			49				
	55	Check No. 55	352.70							
	56	Check No. 56	354.76							
			354.97	Littlerock Creek I.D.	49					
	57	Check No. 57	356.93							
22A	58		357.60	Antelope Valley-East Kern WA	3	3				
			357.72	Antelope Valley-East Kern WA 96th Street East	159	159				
			359.76	Antelope Valley-East Kern WA	566	566				
22B			359.82	Antelope Valley-East Kern WA East Side Treatment Plant	0					

Table 31b. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (East Branch, Continued)

(In acre-feet)

August 1999

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries				
	Beginning and Ending					Entitle-ment	Recreation	Ex-change	Purchase Pool B	Local
No.	Structure	Mile								
22B	58	Pearblossom Pumping Plant	360.61		59,060					
	59	Check No. 59	366.09							
	60	Check No. 60	373.94							
	61	Check No. 61	379.00							
	62	Check No. 62	384.26							
	63	Check No. 63	389.20		Mojave Water Agency Mojave River	37	37			
	64	Check No. 64	395.10							
	65	Check No. 65	400.32							
	66		401.10	Mojave Water Agency Morongo 24" and 42"	81	81				
				Mojave Water Agency Hesperia	0					
23		Mojave Siphon	405.48	Las Flores Ranch	48					
				Mojave Siphon Powerplant	405.65					(Does not include 460 AF of bypass at Mojave Flume)
24	67	Silverwood Lake	407.65	Crestline Lake Arrowhead Water Agency	168	168				
				Calif. State Park Silverwood Agency (Rec.)	8					8
25		San Bernardino Tunnel	411.46		61,830					
					San Gorgonio Pass Water Agency					0
26A	68	Devil Canyon Afterbay Control Structures	412.88	MWD-SC Rialto	20,448	20,448				
				Desert Water Agency (MWD Wheeling Exchange)	6,301					3,444
				San Gabriel Valley Water District	2,714					2,714
				Coachella Valley WD (MWD Wheeling Exchange)	6,000					2,088
				San Bernardino Valley Metropolitan Water District	2,193					2,193
				MWD (SBVMWD Exchange)	0					
28G	69	Santa Ana Valley Pipeline	425.46							
28H			MWD-SC Box Springs	9,020	9,020					
			MWD-SC Perris Bypass Pipeline	13,944						
28J			Lake Perris	440.05	MWD-SC 18"	321	321			
				443.44	MWD-SC 54"	0				
	MWD-SC 78"	0								
				Calif. State Park Lake Perris Recreation	44		44			
MWD Total:					81,397	74,628	0	0	6,769	0

Table 32. Water Quality At Selected SWP Locations

August 1999

Constituent	Units	Thermalito Afterbay At Outlet	North Bay Aqueduct Barker Slough Pumping Plant	Banks Pumping Plant	Delta Mendota Canal At McCabe Rd.	California Aqueduct				Devil Canyon Afterbay Near San Bernardino
						O'Neill Forebay Outlet (Check 13)	Kettleman City (Check 21)	Near Hwy 119 (Check 29)	Tehachapi Afterbay (Check 41)	
Alkalinity	mg/l	40	81	64	73	69	64	65	69	71
Arsenic	mg/l	<0.001	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Boron	mg/l	<0.10	0.1	<0.10	0.2	0.1	0.1	0.1	0.1	0.2
Bromide	mg/l	<0.01	0.03	0.06	0.12	0.08	0.09	0.08	0.10	0.14
Calcium	mg/l	8	13	13	20	15	14	15	15	18
Carbon - Total Organic	mg/l	NR	4	3	3	3	2	NR	3	3
Chloride	mg/l	1	9	19	39	31	28	29	31	46
Chromium	mg/l	<0.005	0.007	0.005	0.006	0.005	0.006	0.005	<0.005	0.005
Copper	mg/l	<0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003
Fluoride	mg/l	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hardness	mg/l	32	76	61	91	70	68	70	70	86
Iron	mg/l	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/l	3	10	7	10	8	8	8	8	10
Manganese	mg/l	<0.005	0.008	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	0.750
Nitrate + Nitrite	mg/l	<0.01	0.32	0.26	NR	NR	NR	NR	0.36	0.37
Phosphorus-Ortho	mg/l	<0.01	0.09	0.05	NR	NR	NR	NR	0.07	0.07
Phosphorus-Total	mg/l	0.01	0.20	0.09	NR	NR	NR	NR	0.11	0.09
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sodium	mg/l	4	16	20	36	28	27	27	27	38
Specific Conductance	µS/cm	78	218	223	360	272	261	265	300	368
Sulfate	mg/l	3	13	15	36	20	20	19	22	34
Total Dissolved Solids	mg/l	54	130	127	205	158	156	153	157	214
Trihalomethane Formation Potential	µg/l	NR	366	301	337	379	295	320	324	346
Turbidity	NTU	3	115	23	18	14	14	14	28	6
Zinc	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0

mg/l milligrams per liter

µg/l micrograms per liter

µS/cm microSiemens per centimeter

NR - Not Reported

NTU - nephelometric turbidity units

Table 33. Water Quality At Selected Delta Stations

August 1999

Date	Tides (feet above mean sea level)		Flow In CFS			Electrical Conductivity in milliSiemens/cn									Cl in mg/l
	(Antioch) Daily Mean		Net Delta Outflow Index		Rio Vista	Antioch	Chippis Island	Emmaton		Jersey Point		Clifton Court	Cache Slough	Delta Mendota Canal	Contra Costa Canal Intake
			Mean Daily	Monthly Average	md					md	md				
	Hi	Half			md	md	md	14dm	md	14dm	md	md	md	md	
1	2.77	1.09	12,198	12,198	13,603	0.51	0.00	0.18	0.19	0.24	0.28	0.13	0.47	0.27	22
2	2.41	0.90	12,580	12,389	13,823	0.47	0.00	0.17	0.18	0.23	0.28	0.10	0.50	0.28	22
3	2.68	0.87	12,906	12,561	13,722	0.42	0.00	0.17	0.18	0.23	0.27	0.10	0.52	0.26	22
4	3.00	0.88	12,289	12,493	13,170	0.43	0.86	0.16	0.18	0.22	0.27	0.11	0.51	0.26	22
5	3.34	1.06	10,353	12,065	12,556	0.45	1.51	0.17	0.18	0.23	0.27	0.13	0.51	0.25	18
6	3.34	1.12	8,779	11,517	12,435	0.47	2.06	0.18	0.18	0.23	0.26	0.13	0.53	0.26	18
7	3.35	1.05	8,580	11,098	11,888	0.46	2.10	0.17	0.18	0.24	0.26	0.12	0.55	0.26	17
8	3.46	1.13	7,861	10,693	11,290	0.53	2.51	0.18	0.18	0.25	0.25	0.12	0.54	0.27	18
9	3.57	1.22	6,989	10,282	10,760	0.61	2.70	0.20	0.18	0.26	0.25	0.12	0.54	0.28	16
10	3.72	1.35	6,499	9,903	9,956	0.71	3.35	0.21	0.18	0.27	0.25	0.12	0.48	0.27	18
11	3.58	1.16	5,239	9,479	9,699	0.72	3.33	0.23	0.18	0.27	0.25	0.12	0.46	0.28	18
12	3.29	1.03	4,786	9,088	9,382	0.73	3.18	0.22	0.19	0.26	0.25	0.12	0.38	0.28	18
13	3.05	1.03	4,524	8,737	9,479	0.71	3.42	0.23	0.19	0.27	0.25	0.13	0.42	0.27	20
14	2.73	0.95	4,748	8,452	9,464	0.73	3.32	0.24	0.19	0.27	0.25	0.12	0.42	0.28	19
15	2.45	0.91	7,236	8,371	9,334	0.76	3.16	0.23	0.20	0.28	0.25	0.12	0.55	0.29	19
16	2.48	0.85	5,308	8,180	9,226	0.81	3.10	0.24	0.20	0.28	0.25	0.00	0.60	0.28	19
17	2.68	0.97	4,147	7,942	8,889	0.83	3.42	0.23	0.21	0.30	0.26	0.09	0.56	0.27	19
18	2.79	1.02	3,616	7,702	8,243	0.92	3.64	0.25	0.21	0.32	0.27	0.12	0.54	0.28	19
19	2.75	0.94	2,668	7,437	8,161	0.90	2.84	0.24	0.22	0.34	0.27	0.12	0.55	0.28	20
20	2.83	1.02	2,640	7,197	7,765	1.03	4.00	0.24	0.22	0.37	0.28	0.11	0.57	0.27	22
21	2.83	1.00	1,974	6,948	7,940	1.18	4.49	0.26	0.23	0.40	0.30	0.11	0.59	0.27	23
22	2.96	1.11	2,269	6,736	8,165	1.33	4.51	0.30	0.24	0.45	0.31	0.10	0.60	0.27	24
23	3.19	1.37	3,857	6,611	8,416	1.67	6.57	0.39	0.25	0.51	0.33	0.09	0.58	0.28	23
24	3.37	1.28	4,067	6,505	8,856	1.83	6.90	0.43	0.27	0.53	0.35	0.10	0.55	0.29	25
25	3.29	1.17	3,884	6,400	8,933	1.86	8.59	0.43	0.28	0.55	0.37	0.10	0.51	0.29	23
26	3.32	1.17	4,101	6,311	9,055	2.21	6.81	0.52	0.30	0.58	0.39	0.10	0.45	0.29	27
27	3.21	1.24	4,219	6,234	9,159	2.35	7.36	0.59	0.33	0.64	0.42	0.10	0.43	0.29	28
28	3.20	1.31	4,358	6,167	9,785	2.62	8.10	0.66	0.36	0.69	0.45	0.10	0.45	0.30	29
29	2.92	1.23	6,060	6,163	10,044	2.56	7.44	0.59	0.38	0.71	0.48	0.10	0.46	0.32	29
30	2.74	1.15	5,824	6,152	10,123	2.38	7.13	0.52	0.40	0.69	0.51	0.12	0.53	0.34	31
31	2.76	0.89	5,809	6,141	10,047	2.10	6.14	0.38	0.41	0.65	0.53	0.12	0.57	0.33	39

Clifton Court Cl(mg/l)=200X EC - 25
 N.R. = No Record.
 N.C. = Not computed due to insufficient data.

e = Estimated

f = Excess Delta conditions with fish concerns.
 r = Excess delta conditions with export/inflow ratio concerns.
 s = Balanced water conditions with storage withdrawals.
 dm = Daily Mean
 md = Mean Daily

**Table 34. Pesticides, Herbicides, and Other Organic
Substances Detected In the SWP**

August 1999

Sampling Location	Sample	Chemical	Concentration
	Date	Detected	µg/l
	1/		2/
North Bay Aqueduct At Barker Slough Pumping Plant	June 16, 1999	None Detected	-
California Aqueduct At Banks Pumping Plant	June 16, 1999	None Detected	-
Delta Mendota Canal At McCabe Road	June 16, 1999	Methyl tert-butyl ether (MTBE)	2.8
California Aqueduct Near Kettleman City (Check 21)	June 16, 1999	None Detected	-
California Aqueduct At Tehachapi Afterbay (Check 41)	June 16, 1999	None Detected	-
Devil Canyon Power Plant At Entrance To Santa Ana Pipeline	June 16, 1999	Methyl tert-butyl ether (MTBE)	2.7

1/ Locations are normally sampled during March, June, and September. Monthly reports will include data for the month in which samples were most recently taken.

2/ Micrograms per liter.

Table 35. Oroville and Delta Field Divisions Energy Data

(in kWh)

August 1999

Date	Oroville Thermalito Complex		Barker Slough Pumping Plant	Cordelia Pumping Plant	Banks Pumping Plant		South Bay Pumping Plant	Del Valle Pumping Plant
	Generation	Load	Load	Load	Total Load	SWP Load	Load	Load
1	11,905,056	0	37,191	29,106	3,685,824	3,685,824	429,750	298
2	14,391,360	0	35,084	28,532	2,915,520	2,915,520	453,445	304
3	14,628,960	0	37,506	31,353	2,982,528	2,982,528	457,720	302
4	12,417,984	2,016	34,447	25,648	3,712,128	3,712,128	444,910	392
5	12,553,344	1,152	39,767	31,269	3,284,544	3,284,544	444,205	293
6	11,617,920	2,304	37,128	28,672	3,846,336	3,846,336	449,915	281
7	8,235,360	2,880	36,001	29,960	3,898,176	3,898,176	455,960	865
8	6,754,176	2,592	33,726	27,657	3,889,536	3,889,536	460,365	1,239
9	11,324,736	2,304	31,934	25,354	3,893,184	3,893,184	461,475	939
10	10,863,648	0	33,047	25,942	3,871,872	3,871,872	447,175	270
11	8,805,024	9,504	32,809	25,088	3,870,144	3,870,144	451,375	256
12	9,406,944	8,064	34,237	26,411	3,857,088	3,857,088	438,850	256
13	11,403,648	8,064	33,803	26,145	3,843,648	3,843,648	437,580	257
14	4,494,240	10,368	34,440	27,853	3,880,512	3,880,512	437,435	255
15	3,098,592	14,112	34,447	26,250	3,470,784	3,470,784	436,355	262
16	7,672,608	11,232	34,412	25,732	3,647,808	3,647,808	446,395	274
17	7,400,448	7,200	35,378	27,356	3,818,688	3,818,688	454,065	269
18	7,125,696	11,232	38,423	29,421	3,922,944	3,922,944	437,590	255
19	7,070,976	11,232	39,277	30,408	3,981,696	3,981,696	429,560	294
20	9,105,120	4,032	34,755	26,348	3,987,456	3,987,456	444,205	277
21	5,374,656	2,592	37,499	30,135	4,008,192	4,008,192	443,515	271
22	7,872,480	12,960	39,242	28,273	4,008,768	4,008,768	438,595	322
23	8,722,944	8,064	39,305	29,267	3,272,448	3,272,448	453,445	317
24	12,239,424	0	39,312	29,967	3,445,824	3,445,824	453,450	346
25	11,488,032	864	42,063	31,591	3,969,216	3,969,216	444,880	343
26	10,699,776	7,200	44,562	30,898	4,044,480	4,044,480	453,295	312
27	9,251,136	6,624	35,497	27,790	4,015,872	4,015,872	453,755	284
28	4,116,096	10,080	39,186	27,601	4,016,448	4,016,448	425,285	219
29	3,140,352	16,704	37,905	29,127	3,959,808	3,959,808	400,865	252
30	8,839,584	8,064	36,967	28,406	3,984,000	3,984,000	417,805	250
31	8,844,768	6,336	38,906	29,834	4,012,992	4,012,992	428,235	274
Total	280,865,088	187,776	1,138,256	877,394	116,998,464	116,998,464	13,731,455	11,028

Table 36. San Luis Field Division Energy Data

August 1999

(in kWh)

Date	Dos Amigos Pumping Plant		Gianelli Pumping-Generating Plant			
	Total Load	SWP Load 1/	Total Generation	SWP Generation 1/	Total Load	SWP Load 1/
1	2,236,608	1,474,608	0	0	19,296	19,296
2	2,656,944	1,894,944	1,537,344	823,344	9,504	9,504
3	2,617,200	1,855,200	1,058,688	638,688	11,808	11,808
4	2,893,248	2,131,248	883,296	379,296	12,672	12,672
5	2,736,288	1,974,288	848,736	344,736	13,536	13,536
6	2,868,624	2,106,624	2,028,384	768,384	6,048	6,048
7	2,672,496	1,910,496	973,152	301,152	12,960	12,960
8	1,953,216	1,191,216	0	0	825,696	825,696
9	2,471,472	1,736,472	784,800	469,800	660,960	660,960
10	2,348,928	1,613,928	1,059,552	429,552	559,584	559,584
11	2,362,320	1,627,320	619,200	178,200	566,208	566,208
12	2,470,896	1,735,896	811,872	211,872	563,616	563,616
13	2,491,920	1,756,920	1,021,248	421,248	562,464	562,464
14	2,183,472	1,496,472	722,880	252,880	750,816	750,816
15	1,819,872	1,132,872	4,032	4,032	546,912	546,912
16	2,373,120	1,749,120	897,984	377,984	662,400	662,400
17	2,402,208	1,778,208	910,656	390,656	564,192	564,192
18	2,539,872	1,915,872	539,712	439,712	659,520	659,520
19	2,772,864	2,148,864	1,159,488	919,488	647,136	647,136
20	2,565,792	2,082,792	1,183,968	790,968	738,432	738,432
21	2,458,224	1,975,224	1,332,288	747,288	744,480	744,480
22	2,140,848	1,657,848	230,688	230,688	16,992	16,992
23	2,181,312	2,001,312	993,024	993,024	897,696	897,696
24	2,404,224	2,224,224	1,138,176	1,138,176	1,088,928	766,928
25	2,189,664	2,009,664	1,104,768	1,104,768	1,229,472	368,472
26	2,318,832	2,318,832	689,472	689,472	1,176,480	637,480
27	2,186,784	2,186,784	1,104,192	1,104,192	643,104	643,104
28	2,010,384	2,010,384	752,544	752,544	799,200	661,200
29	1,428,480	1,428,480	147,168	147,168	1,414,944	701,944
30	1,634,544	1,088,544	0	0	1,514,304	1,192,304
31	1,696,896	1,150,896	0	0	1,149,120	1,149,120
Total	72,087,552	55,365,552	24,537,312	15,049,312	19,068,480	16,173,480

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping; adjustments to SWP water shares are made to balance the mismatch.

Table 37. San Joaquin Field Division Pumping Plant Energy Load Data

(in kWh)

August 1999

Date	Coastal Branch					California Aqueduct			
	Las Perillas	Badger Hill	Devils Den	Bluestone	Polonio	Buena Vista	Teerink	Chrisman	Edmonston
1	48,790	133,128	56,754	57,924	55,422	934,128	936,864	2,132,928	7,540,560
2	47,086	129,552	58,392	60,660	60,750	952,632	908,352	1,956,960	6,975,360
3	49,710	135,848	56,808	58,086	56,952	1,019,232	944,640	2,092,896	7,174,800
4	49,690	138,152	74,214	76,086	73,602	1,110,672	1,052,640	2,280,672	7,756,560
5	47,234	128,840	73,746	77,148	75,024	1,082,736	1,021,176	2,260,800	7,826,400
6	52,210	141,952	65,952	67,752	66,924	1,045,440	999,720	2,203,776	7,691,040
7	40,546	113,352	65,934	67,806	66,726	973,656	953,208	2,106,432	7,324,560
8	39,958	108,984	51,804	54,558	53,766	853,200	864,936	1,916,064	6,713,280
9	47,736	131,792	66,456	68,148	65,556	753,264	695,520	1,512,864	5,409,360
10	47,418	134,352	61,182	63,972	63,216	764,352	680,184	1,454,400	5,008,320
11	47,214	128,736	60,498	63,324	61,686	1,088,280	1,064,520	2,382,912	8,298,720
12	49,068	136,368	66,492	67,680	67,032	1,179,720	1,164,312	2,553,696	8,965,440
13	46,682	128,768	78,732	81,036	78,750	1,150,848	1,107,072	2,515,104	8,813,520
14	39,126	107,848	65,916	67,842	66,708	1,040,184	992,520	2,210,688	7,809,840
15	30,968	95,968	55,368	57,888	58,050	912,600	871,848	2,034,144	7,060,320
16	41,116	116,456	69,660	70,920	70,326	1,047,888	1,047,816	2,342,592	8,296,560
17	41,364	117,736	59,616	60,984	59,832	1,025,136	948,168	2,098,656	7,294,320
18	41,544	116,776	63,360	64,026	63,036	1,168,344	1,137,960	2,503,296	8,971,200
19	37,910	109,736	73,998	76,374	75,366	1,211,616	1,163,736	2,622,528	8,963,280
20	41,292	121,216	76,284	77,634	75,996	1,082,952	1,075,104	2,386,656	8,501,760
21	39,462	115,328	53,658	56,808	54,972	993,240	931,248	2,097,216	7,252,560
22	34,958	104,256	66,258	67,842	67,266	1,014,048	1,036,800	2,405,088	8,360,640
23	41,592	117,568	64,890	67,806	65,520	1,049,976	1,062,792	2,378,304	8,336,160
24	41,200	113,832	65,844	68,670	66,816	1,097,712	1,059,048	2,407,104	8,563,680
25	38,610	107,336	78,066	80,514	79,668	1,054,008	1,121,832	2,516,256	8,736,480
26	29,282	85,344	47,610	49,752	49,356	1,156,464	1,096,488	2,465,280	8,704,080
27	40,550	113,248	76,878	73,638	75,816	1,070,568	1,074,744	2,393,568	8,441,280
28	37,044	104,424	53,730	51,462	55,602	919,080	932,472	2,126,880	7,328,160
29	36,154	106,632	59,418	55,638	59,634	1,011,096	1,009,728	2,266,272	7,896,960
30	39,098	111,320	54,234	50,886	54,792	999,288	1,061,352	2,403,936	8,525,520
31	34,532	101,744	56,124	52,776	56,664	1,121,112	1,111,176	2,509,344	8,776,080
Total	1,299,144	3,656,592	1,977,876	2,015,640	2,000,826	31,883,472	31,127,976	69,537,312	243,316,800

Table 38. Southern Field Division Energy Data

(in kWh)

August 1999

Date	West Branch			East Branch			
	Oso Pumping Plant Load	Warne Powerplant Generation	Castaic Powerplant SWP Generation	Alamo Powerplant Generation	Pearblossom Pumping Plant Load	Devil Canyon Powerplant Generation	Mojave Siphon Powerplant Generation
1	337,904	489,960	960,000	244,972	1,135,188	2,099,808	121,716
2	233,968	658,728	960,000	226,800	1,177,488	1,856,064	135,408
3	275,464	615,600	960,000	255,472	1,165,596	1,900,992	154,938
4	269,080	700,920	960,000	229,852	1,274,760	2,360,736	148,911
5	337,512	703,152	960,000	231,588	1,397,364	2,642,688	159,726
6	270,368	696,672	960,000	225,372	1,265,568	2,283,744	154,749
7	270,536	699,192	960,000	212,156	1,115,892	2,374,944	154,077
8	197,400	0	960,000	272,132	1,081,128	2,003,136	137,466
9	67,200	0	1,080,000	232,092	1,179,144	2,062,656	143,535
10	50,680	76,536	1,080,000	221,172	1,151,832	2,461,728	144,018
11	321,216	953,064	1,080,000	230,188	1,271,076	2,564,160	150,591
12	365,400	998,856	1,080,000	246,792	1,349,064	2,713,632	143,136
13	363,944	1,050,840	1,080,000	253,960	1,497,792	2,642,112	181,104
14	338,184	1,066,032	1,080,000	222,740	1,115,448	2,488,704	130,872
15	246,792	72,216	1,080,000	267,316	1,223,424	2,463,456	155,631
16	275,688	898,200	1,080,000	251,804	1,502,580	2,741,088	166,299
17	392,840	786,528	1,080,000	198,464	1,101,132	2,537,856	141,456
18	307,272	782,424	1,080,000	290,752	1,268,160	2,449,536	156,828
19	321,104	806,688	1,080,000	250,404	1,438,632	2,548,704	166,593
20	294,336	786,384	1,080,000	246,232	1,485,288	2,645,280	175,959
21	341,768	796,824	1,080,000	201,348	1,012,020	2,490,336	131,586
22	397,432	281,088	1,080,000	259,560	1,298,556	2,392,992	144,249
23	269,080	802,152	1,080,000	249,620	1,488,696	2,766,912	164,619
24	295,344	796,104	1,080,000	253,008	1,555,188	2,656,512	158,739
25	302,960	808,128	1,080,000	259,504	1,465,716	2,522,400	163,380
26	301,560	819,504	1,080,000	263,312	1,462,464	2,717,952	180,516
27	301,672	754,200	1,080,000	254,352	1,380,972	2,460,768	178,521
28	314,328	861,336	1,080,000	208,600	1,042,068	1,974,432	125,118
29	397,488	226,152	1,080,000	187,740	1,131,036	1,844,160	175,350
30	295,344	770,472	1,080,000	179,732	1,484,028	2,467,392	165,837
31	297,584	771,120	1,080,000	274,568	1,547,988	2,704,896	165,711
Total	9,051,448	20,529,072	32,520,000	7,401,604	40,065,288	74,839,776	4,776,639